TITLE

HERBICIDAL OXADIAZOLIDINES

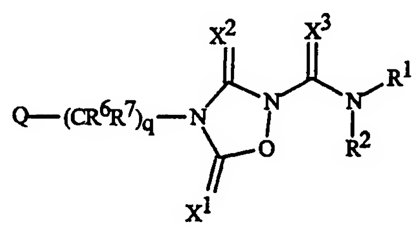
BACKGROUND OF THE INVENTION

This invention relates to certain oxadiazolidines, processes for their preparation, their *N*-oxides, agriculturally suitable salts and compositions, and methods of their use for controlling undesirable vegetation. This invention also relates to mixtures of herbicides that have a synergistic effect on weeds or have a safening effect on crops while retaining or increasing weed control.

The control of undesired vegetation is extremely important in achieving high crop efficiency. Achievement of selective control of the growth of weeds especially in such useful crops as rice, soybean, sugar beet, corn (maize), potato, wheat, barley, tomato and plantation crops, among others, is very desirable. Unchecked weed growth in such useful crops can cause significant reduction in productivity and thereby result in increased costs to the consumer. The control of undesired vegetation in noncrop areas is also important. Many products are commercially available for these purposes, but the need continues for new compounds which are more effective, less costly, less toxic, environmentally safer or have different modes of action. *Arch. Pharm.* (1974), *307*, 7-12 discloses the chemical structures of *N,N*-disubstituted 4-aryloxazolidindiones. However, it does not disclose the compounds of the present invention.

SUMMARY OF THE INVENTION

This invention is directed to compounds and processes to prepare compounds of Formula 1 including all geometric and stereoisomers, *N*-oxides, and agriculturally suitable salts thereof, agricultural compositions containing them and their use for controlling undesirable vegetation:



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wherein

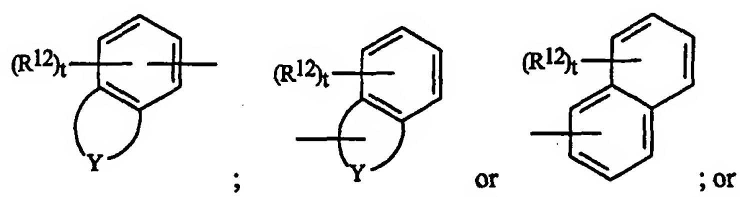
Q is H; or C_1-C_{12} alkyl, C_3-C_{10} cycloalkyl, C_6-C_{14} bicycloalkyl, C_3-C_{12} alkenyl, C_3-C_{10} cycloalkenyl, C_6-C_{14} bicycloalkenyl or C_3-C_{12} alkynyl, each optionally substituted with one or more R^{21}; or

Q is a 3- to 7-membered fully saturated or 5- to 7-membered partially saturated heterocyclic ring containing one or two X, provided that (a) when X is other than O or $S(O)_n$, then only one X may be present and (b) when two X are present in the ring, they cannot be bonded directly to each other; or

Q is a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more than one oxygen and no more than one sulfur, and each heterocyclic ring system is optionally substituted with one or more R^{16}; and when Q is a 5- or 6-membered aromatic heterocyclic ring system containing a nitrogen, then Q is bonded through any available carbon or nitrogen atom by replacement of a hydrogen on said carbon or nitrogen atom; or

Q is phenyl optionally substituted with one or more substituents independently selected from the group consisting of R^{16}, phenoxy and Z; or

Q is



; or

Q is $-C(R^{14})(=NOR^{15})$, $-C(O)R^{19}$, $-C(O)OR^{19}$, $-C(O)SR^{19}$, $-C(S)R^{19}$, $-C(S)OR^{19}$, $-C(S)SR^{19}$, $-C(O)NR^{23}R^{24}$, $-C(S)NR^{23}R^{24}$, $-OR^{19}$, $-NR^{19}R^{20}$, $-S(O)_nR^{19}$ or $-S(O)_nNR^{19}R^{20}$;

each X is -O-, $-S(O)_n-$, -N=, $-NR^{10}-$ or $-Si(R^{11})_2-$;

Y is, together with the carbons to which it is attached, a fully or partially saturated 5-, 6- or 7-membered carbocyclic ring optionally substituted with one or more C_1-C_4 alkyl groups; or

Y is, together with the carbons to which it is attached, a fully or partially saturated 5-, 6- or 7-membered heterocyclic ring which contains one or two X and is optionally substituted with one or more R^{12}, provided that when said heterocyclic ring contains two X, then one X is other than O;

Z is phenyl or a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more than one oxygen and no more than one sulfur, and each phenyl and heterocyclic ring system is optionally substituted with one or more R^{16};

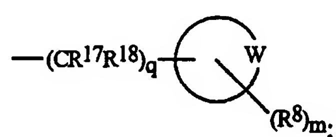
R^1 is C_1-C_6 alkyl, C_1-C_6 haloalkyl, C_3-C_6 alkenyl, C_3-C_6 haloalkenyl, C_3-C_6 alkynyl, C_3-C_6 haloalkynyl, C_1-C_6 alkoxy, C_2-C_6 alkoxyalkyl or C_2-C_6 haloalkoxyalkyl; or R^1 is C_3-C_7 cycloalkyl or C_3-C_7 cycloalkenyl, each optionally substituted with one or more R^5; or

R^1 is phenyl optionally substituted with one or more R^{13}; or

R^1 is a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more than one oxygen and no more than one sulfur, and each heterocyclic ring system is optionally substituted with one or more R^{16};

R^2 is C_1-C_6 alkyl, C_1-C_6 haloalkyl, C_3-C_7 cycloalkyl, C_3-C_6 alkenyl, C_3-C_6 haloalkenyl, C_3-C_6 alkynyl, C_3-C_6 haloalkynyl, C_1-C_6 alkoxy, C_2-C_6 alkoxyalkyl, C_2-C_6 haloalkoxyalkyl or NR^3R^4; or

R^2 is



; or

R^1 and R^2 are taken together as $-CH_2CH_2-$, $-CH_2CH_2CH_2-$, $-CH_2CH_2CH_2CH_2-$, $-CH_2CH_2CH_2CH_2CH_2-$ or $-CH_2CH_2OCH_2CH_2-$;

R^3 is C_1-C_6 alkyl, C_1-C_6 haloalkyl, C_3-C_6 alkenyl, C_3-C_6 haloalkenyl, C_3-C_6 alkynyl, C_3-C_6 haloalkynyl; or

R^3 is C_3-C_7 cycloalkyl or C_3-C_7 cycloalkenyl, each optionally substituted with one or more R^5; or

R^3 is a saturated or partially saturated 5-, 6- or 7-membered heterocyclic ring containing 1 to 2 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, and each heterocyclic ring is optionally substituted with one or more R^5; or

R^3 is phenyl optionally substituted with one or more R^{26} groups; or

R^1 and R^3 are taken together with the two nitrogen atoms to which they are attached to form a saturated or partially saturated 5-, 6- or 7-membered heterocyclic ring containing an optional third heteroatom selected from the group consisting of oxygen, sulfur and nitrogen, and said heterocyclic ring is optionally substituted with one or more R^9; or

R^2 and R^{13}, together with the two atoms to which they are attached and the atom between them, form a fully saturated 5-, 6- or 7-membered carbocyclic or heterocyclic ring containing one oxygen, one sulfur or one or two nitrogen

atoms, said heterocyclic ring is optionally substituted with one or more R^{12}, provided that when said heterocyclic ring contains two nitrogen atoms, they are other than bonded directly to each other;

R^4 is H or C_1-C_4 alkyl; or

R^3 and R^4 are taken together with the nitrogen atom to which they are attached to form a saturated or partially saturated 5-, 6- or 7-membered heterocyclic ring containing an optional second heteroatom selected from the group consisting of oxygen, sulfur and nitrogen, and said heterocyclic ring is optionally substituted with 1-4 R^9;

each R^5 is independently halogen, C_1-C_4 alkyl or C_1-C_4 alkoxy; or when two R^5 are attached to the same carbon, then said two R^5 groups are taken together as (=O);

each R^6 and R^7 are independently H or C_1-C_4 alkyl;

R^8 is independently C_1-C_4 alkyl, C_1-C_4 haloalkyl or C_1-C_4 alkoxy;

each R^9 is independently C_1-C_4 alkyl or C_1-C_4 alkoxy; or when two R^9 are attached to the same carbon, then said two R^9 groups are taken together as (=O);

W is, together with the carbons to which it is attached, a fully or partially saturated 5-, 6- or 7-membered heterocyclic ring containing one or two X, provided that (a) when X is other than O or $S(O)_n$, then only one X may be present; (b) when two X are present in the ring, they cannot be bonded directly to each other; and (c) said heterocyclic ring is bonded to the group $(CR^{17}R^{18})_q$ through other than X;

R^{10} is H, C_1-C_4 alkyl, C_1-C_4 haloalkyl, C_3-C_4 alkenyl, C_3-C_4 alkynyl, C_2-C_4 alkoxycarbonyl or C_2-C_4 alkylcarbonyl; or R^{10} is phenyl optionally substituted with C_1-C_3 alkyl, halogen, cyano, nitro or C_2-C_4 alkoxycarbonyl;

each R^{11} is C_1-C_4 alkyl;

each R^{12} is independently halogen, C_1-C_4 alkyl, C_1-C_4 haloalkyl, C_1-C_4 alkoxy, C_1-C_4 haloalkoxy, C_1-C_4 alkylthio, C_1-C_4 haloalkylthio, C_1-C_4 alkylsufinyl, C_1-C_4 alkylsufonyl or C_2-C_4 alkoxycarbonyl;

each R^{13} is independently halogen, C_1-C_3 alkyl, C_1-C_3 haloalkyl, C_1-C_3 alkoxy, C_1-C_3 haloalkoxy, C_3-C_6 alkenyloxy, C_3-C_6 alkynyloxy, C_1-C_4 alkylthio, C_1-C_4 haloalkylthio, C_1-C_4 alkylsufinyl, C_1-C_4 alkylsufonyl, cyano, amino, nitro or C_2-C_4 alkoxycarbonyl;

R^{14} is H, C_1-C_6 alkyl, C_1-C_6 haloalkyl or C_2-C_6 alkoxyalkyl; or

R^{14} and R^6, together with the carbon atoms to which they are bonded, form a 5- or 6-membered saturated carbocyclic ring optionally substituted with one or more C_1-C_4 alkyl groups;

R^{15} is H, C_1-C_6 alkyl, C_1-C_6 haloalkyl, C_3-C_4 alkenyl or C_3-C_4 alkynyl;

each R^{16} is independently halogen, nitro, cyano, C_1-C_4 alkyl, C_1-C_4 haloalkyl, C_3-C_4 alkenyl, C_3-C_4 alkynyl, OR^{22}, $NR^{23}R^{24}$ or $S(O)_nR^{19}$;

each R^{17} and R^{18} are independently H or C_1-C_4 alkyl;

each R^{19} and R^{20} are independently C_1-C_{12} alkyl, C_3-C_8 cycloalkyl, C_3-C_{12} alkenyl, C_3-C_8 cycloalkenyl or C_3-C_{12} alkynyl, each optionally substituted with one or more R^{21};

each R^{21} is halogen, C_4-C_8 trialkylsilylalkyl, CN, NO_2, $-OR^{22}$, $-NR^{23}R^{24}$, $-S(O)_nR^{22}$, $-S(O)_nNR^{23}R^{24}$, $-C(O)R^{22}$, $-C(S)R^{22}$, $-C(O)OR^{22}$, $-C(S)OR^{22}$, $-C(S)SR^{22}$, $-C(O)NR^{23}R^{24}$, $-C(S)NR^{23}R^{24}$, $-CHR^{25}COR^{22}$, $-CHR^{25}P(O)(OR^{22})_2$, $-CHR^{25}P(S)(OR^{22})_2$, $-CHR^{25}C(O)NR^{23}R^{24}$, $-CHR^{25}C(O)NH_2$, $-CHR^{25}CO_2R^{22}$, phenyl optionally substituted with one or more R^{26} groups or benzyl optionally substituted with one or more R^{26} groups;

each R^{22} is C_1-C_8 alkyl, C_3-C_8 cycloalkyl, C_3-C_8 alkenyl, C_3-C_8 alkynyl, C_1-C_8 haloalkyl, C_2-C_8 alkoxyalkyl, C_2-C_8 alkylthioalkyl, C_2-C_8 alkylsulfinylalkyl, C_2-C_8 alkylsulfonylalkyl, C_4-C_8 alkoxyalkoxyalkyl, C_4-C_8 cycloalkylalkyl, C_4-C_8 alkenoxyalkyl, C_4-C_8 alkynyloxyalkyl, C_6-C_8 cycloalkoxyalkyl, C_4-C_8 alkenyloxyalkyl, C_4-C_8 alkynyloxyalkyl, C_3-C_8 haloalkoxyalkyl, C_4-C_8 haloalkenoxyalkyl, C_4-C_8 haloalkynyloxyalkyl, C_6-C_8 cycloalkylthioalkyl, C_4-C_8 alkenylthioalkyl, C_4-C_8 alkynylthioalkyl, C_1-C_4 alkyl substituted with phenoxy or benzyloxy, each ring optionally substituted with halogen, C_1-C_3 alkyl or C_1-C_3 haloalkyl, C_4-C_8 trialkylsilylalkyl, C_3-C_8 cyanoalkyl, C_3-C_8 halocycloalkyl, C_3-C_8 haloalkenyl, C_5-C_8 alkoxyalkenyl, C_5-C_8 haloalkoxyalkenyl, C_5-C_8 alkylthioalkenyl, C_3-C_8 haloalkynyl, C_5-C_8 alkoxyalkynyl, C_5-C_8 haloalkoxyalkynyl, C_5-C_8 alkylthioalkynyl, C_2-C_8 alkyl carbonyl, C_2-C_8 alkoxy carbonyl, phenyl optionally substituted with halogen, CN, C_1-C_2 haloalkyl and C_1-C_2 haloalkoxy or benzyl optionally substituted with halogen, C_1-C_3 alkyl and C_1-C_3 haloalkyl;

each R^{23} is H or C_1-C_4 alkyl;

each R^{24} is C_1-C_4 alkyl or phenyl optionally substituted with one or more R^{26} groups;

R^{23} and R^{24} may be taken together as $-(CH_2)_5-$, $-(CH_2)_4-$ or $-CH_2CH_2OCH_2CH_2-$, each ring optionally substituted with C_1-C_3 alkyl, phenyl or benzyl;

each R^{25} is H or C_1-C_4 alkyl;

each R^{26} is C_1-C_3 alkyl, C_1-C_3 haloalkyl, C_1-C_3 alkoxy, C_1-C_3 haloalkoxy, C_1-C_3 alkylthio, C_2-C_5 alkylcarbonyl, C_2-C_5 alkoxycarbonyl, halogen, amino, cyano or nitro;

R^{28} is H or C_1-C_4 alkyl;

X^1 and X^2 are independently O or S;

X^3 is O, S or NR^{28};

m is 0, 1, 2, 3 or 4;

each n is independently 0, 1 or 2;

p is 0 or 1;

each q is independently 0, 1 or 2; and

t is 0, 1 or 2;

provided that when Q is unsubstituted phenyl, X^1, X^2 and X^3 are O, q is 0 and R^2 is methyl, then R^1 is other than methyl.

In the above recitations, the term "alkyl", used either alone or in compound words such as "alkylthio" or "haloalkyl" includes straight-chain or branched alkyl, such as, methyl, ethyl, *n*-propyl, *i*-propyl, or the different butyl, pentyl or hexyl isomers. The term "1-2 alkyl" indicates that one or two of the available positions for that substituent may be alkyl. "Alkenyl" includes straight-chain or branched alkenes such as 1-propenyl, 2-propenyl, and the different butenyl, pentenyl and hexenyl isomers. "Alkenyl" also includes polyenes such as 1,2-propadienyl and 2,4-hexadienyl. "Alkynyl" includes straight-chain or branched alkynes such as 1-propynyl, 2-propynyl and the different butynyl, pentynyl and hexynyl isomers. "Alkynyl" can also include moieties comprised of multiple triple bonds such as 2,5-hexadiynyl. "Alkoxy" includes, for example, methoxy, ethoxy, *n*-propyloxy, isopropyloxy and the different butoxy, pentoxy and hexyloxy isomers. "Alkoxyalkyl" denotes alkoxy substitution on alkyl. Examples of "alkoxyalkyl" include CH_3OCH_2, $CH_3OCH_2CH_2$, $CH_3CH_2OCH_2$, $CH_3CH_2CH_2CH_2OCH_2$ and $CH_3CH_2OCH_2CH_2$. "Alkylthio" includes branched or straight-chain alkylthio moieties such as methylthio, ethylthio, and the different propylthio, butylthio, pentylthio and hexylthio isomers. "Cycloalkyl" includes, for example, cyclopropyl, cyclobutyl, cyclopentyl and cyclohexyl. "Saturated Carbocyclic" ring denotes a ring having a backbone consisting of carbon atoms linked to one another by single bonds; unless otherwise specified, the remaining carbon valences are occupied by hydrogen atoms.

The term "halogen", either alone or in compound words such as "haloalkyl", includes fluorine, chlorine, bromine or iodine. Further, when used in compound words such as "haloalkyl", said alkyl may be partially or fully substituted with halogen atoms which may be the same or different. Examples of "haloalkyl" include F_3C, $ClCH_2$, CF_3CH_2 and CF_3CCl_2. The terms "haloalkenyl", "haloalkynyl", "haloalkoxy", and the like, are defined analogously to the term "haloalkyl". Examples of "haloalkenyl" include $(Cl)_2C{=}CHCH_2$ and $CF_3CH_2CH{=}CHCH_2$. Examples of "haloalkynyl" include $HC{\equiv}CCHCl$, $CF_3C{\equiv}C$,

$CCl_3C{\equiv}C$ and $FCH_2C{\equiv}CCH_2$. Examples of "haloalkoxy" include CF_3O, CCl_3CH_2O, $HCF_2CH_2CH_2O$ and CF_3CH_2O.

The total number of carbon atoms in a substituent group is indicated by the "C_i-C_j" prefix where i and j are numbers from 1 to 12. For example, C_1-C_3 alkylsulfonyl designates methylsulfonyl through propylsulfonyl; C_2 alkoxyalkyl designates CH_3OCH_2; C_3 alkoxyalkyl designates, for example, $CH_3CH(OCH_3)$, $CH_3OCH_2CH_2$ or $CH_3CH_2OCH_2$; and C_4 alkoxyalkyl designates the various isomers of an alkyl group substituted with an alkoxy group containing a total of four carbon atoms, examples including $CH_3CH_2CH_2OCH_2$ and $CH_3CH_2OCH_2CH_2$. In the above recitations, when a compound of Formula 1 contains a heterocyclic ring, all substituents are attached to this ring through any available carbon or nitrogen by replacement of a hydrogen on said carbon or nitrogen.

When a group contains a substituent which can be hydrogen, for example R^3, then, when this substituent is taken as hydrogen, it is recognized that this is equivalent to said group being unsubstituted.

Compounds of this invention can exist as one or more stereoisomers. The various stereoisomers include enantiomers, diastereomers, atropisomers and geometric isomers. One skilled in the art will appreciate that one stereoisomer may be more active and/or may exhibit beneficial effects when enriched relative to the other stereoisomer(s) or when separated from the other stereoisomer(s). Additionally, the skilled artisan knows how to separate, enrich, and/or to selectively prepare said stereoisomers. Accordingly, the present invention comprises compounds selected from Formula 1, *N*-oxides and agriculturally suitable salts thereof. The compounds of the invention may be present as a mixture of stereoisomers, individual stereoisomers, or as an optically active form.

One skilled in the art will appreciate that not all nitrogen containing heterocycles can form *N*-oxides since the nitrogen requires an available lone pair for oxidation to the oxide; one skilled in the art will recognize those nitrogen containing heterocycles which can form *N*-oxides. One skilled in the art will also recognize that tertiary amines can form *N*-oxides. Synthetic methods for the preparation of *N*-oxides of heterocycles and tertiary amines are very well known by one skilled in the art including the oxidation of heterocycles and tertiary amines with peroxy acids such as peracetic and *m*-chloroperbenzoic acid (MCPBA), hydrogen peroxide, alkyl hydroperoxides such as *t*-butyl hydroperoxide, sodium perborate, and dioxiranes such as dimethydioxirane. These methods for the preparation of *N*-oxides have been extensively described and reviewed in the literature, see for example: T. L. Gilchrist in *Comprehensive Organic Synthesis*, vol. 7, pp 748-750, S. V. Ley, Ed., Pergamon Press; M. Tisler and B. Stanovnik in *Comprehensive Heterocyclic Chemistry*, vol. 3, pp 18-20, A. J. Boulton and A. McKillop, Eds., Pergamon Press; M. R. Grimmett and

B. R. T. Keene in *Advances in Heterocyclic Chemistry*, vol. 43, pp 149-161, A. R. Katritzky, Ed., Academic Press; M. Tisler and B. Stanovnik in *Advances in Heterocyclic Chemistry*, vol. 9, pp 285-291, A. R. Katritzky and A. J. Boulton, Eds., Academic Press; and G. W. H. Cheeseman and E. S. G. Werstiuk in *Advances in Heterocyclic Chemistry*, vol. 22, pp 390-392, A. R. Katritzky and A. J. Boulton, Eds., Academic Press.

The salts of the compounds of the invention include acid-addition salts with inorganic or organic acids such as hydrobromic, hydrochloric, nitric, phosphoric, sulfuric, acetic, butyric, fumaric, lactic, maleic, malonic, oxalic, propionic, salicylic, tartaric, 4-toluenesulfonic or valeric acids.

Preferred compounds for reasons of better activity and/or ease of synthesis are:

Preferred 1. Compounds of Formula 1 wherein

Q is H; or C_1-C_{12} alkyl, C_3-C_8 cycloalkyl, C_3-C_{12} alkenyl, C_3-C_8 cycloalkenyl or C_3-C_{12} alkynyl, each optionally substituted with one or more R^{21}; or

Q is a 3- to 7-membered fully saturated or 5- to 7-membered partially saturated heterocyclic ring containing one or two X, provided that (a) when X is other than O or $S(O)_n$, then only one X may be present and (b) when two X are present in the ring, they cannot be bonded directly to each other; or

Q is a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more than one oxygen and no more than one sulfur, and each heterocyclic ring system is optionally substituted with one or more R^{16}; and when Q is a 5- or 6-membered aromatic heterocyclic ring system containing a nitrogen, then Q is bonded through any available carbon or nitrogen atom by replacement of a hydrogen on said carbon or nitrogen atom; or

Q is phenyl optionally substituted with one or more substituents independently selected from the group consisting of R^{16}, phenoxy and Z.

Preferred 2. Compounds of Preferred 1 wherein

Q is C_1-C_{12} alkyl, C_3-C_8 cycloalkyl, C_3-C_{12} alkenyl, C_3-C_8 cycloalkenyl or C_3-C_{12} alkynyl, each optionally substituted with one or more R^{21}.

Preferred 3. Compounds of Preferred 1 wherein

Q is a 3- to 7-membered fully saturated or 5- to 7-membered partially saturated heterocyclic ring containing one or two X, provided that (a) when X is other than O or $S(O)_n$, then only one X may be present and (b) when two X are present in the ring, they cannot be bonded directly to each other; or

Q is a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more than one oxygen and no more than one sulfur, and each heterocyclic ring system is optionally substituted with one or more R^{16}; and when Q is a 5- or 6-membered aromatic heterocyclic ring system containing a nitrogen, then Q is bonded through any available carbon or nitrogen atom by replacement of a hydrogen on said carbon or nitrogen atom.

Preferred 4. Compounds of Preferred 1 wherein

Q is phenyl optionally substituted with one or more substituents independently selected from the group consisting of R^{16}, phenoxy and Z.

Preferred 5. Compounds of Preferred 2 wherein

Q is C_1-C_6 alkyl optionally substituted with one or more R^{21}, C_5-C_7 cycloalkyl, C_3-C_7 alkenyl or C_3-C_6 alkynyl.

Preferred 6. Compounds of Preferred 3 wherein

Q is a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more than one oxygen and no more than one sulfur, and each heterocyclic ring system is optionally substituted with one or more R^{16}; and when Q is a 5- or 6-membered aromatic heterocyclic ring system containing a nitrogen, then Q is bonded through any available carbon or nitrogen atom by replacement of a hydrogen on said carbon or nitrogen atom.

Preferred 7. Compounds of Preferred 4 wherein

Q is phenyl optionally substituted with one or more substituents independently selected from the group consisting of R^{16}.

Preferred 8. Compounds of Preferred 2, Preferred 3 or Preferred 4 wherein X^1, X^2 and X^3 are O.

Preferred 9. Compounds of Preferred 7 wherein

Q is phenyl with substituents on the 2-, and 6-position independently selected from the group consisting of R^{16}.

Preferred 10. Compounds of Preferred 5 wherein

q is 0 or 1.

Preferred 11. Compounds of Preferred 6 wherein

q is 0 or 1.

Preferred 12. Compounds of Preferred 7 wherein

q is 0 or 1.

Preferred 13. Compounds of Preferred 1 wherein

R^1 is phenyl substituted with one or more R^{13}.

Preferred 14. Compounds of Preferred 1 wherein

R^2 is C_2-C_6 alkyl, C_2-C_6 haloalkyl or C_2-C_6 alkoxyalkyl.

Most preferred is the compound of Formula 1 which is selected from the group consisting of:

(a) *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-4-(2-methylphenyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide;

(b) 4-(2,6-dimethylphenyl)-*N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide;

(c) 4-(2,6-dimethylphenyl)-*N*-(1-methylethyl)-3,5-dioxo-*N*-phenyl-1,2,4-oxadiazolidine-2-carboxamide;

(d) 4-cyclohexyl-*N*-(1-methylethyl)-3,5-dioxo-*N*-phenyl-1,2,4-oxadiazolidine-2-carboxamide;

(e) 4-cyclohexyl-*N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide;

(f) *N*,4-bis(1-methylethyl)-3,5-dioxo-*N*-phenyl-1,2,4-oxadiazolidine-2-carboxamide;

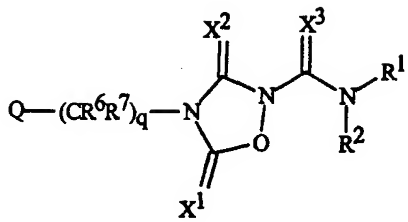
(g) *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-4-(cyclopropyl)-1,2,4-oxadiazolidine-2-carboxamide; and

(h) *N*-(4-fluorophenyl)-*N*,4-bis(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-carboxamide.

The oxadiazolidines of Formula 1 are useful as herbicides. The present invention also relates to processes for preparing an oxadiazolidine of Formula 1. The present processes for preparing the oxadiazolidines of Formula 1 provided herein are characterized by employing a process sequence selected from process sequences A, B, C, D or E as described below.

PROCESS SEQUENCE A

A process for preparing a compound of Formula 1



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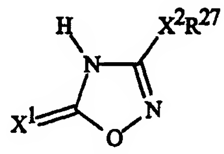
wherein Q, R^6, R^7, q, X^1, X^2, X^3, R^1 and R^2 are as defined above, comprising:

(a) contacting a compound of Formula 5



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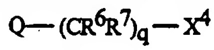
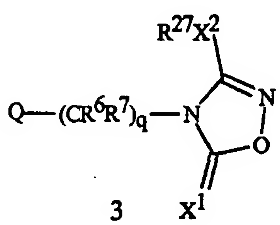
wherein R^{27} is $-(CR^6R^7)_q$-Q, with a compound of Formula 4



4

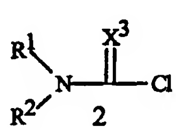
wherein X^4 is halogen or mesylate, in the presence of a base to provide a compound of Formula 3



3

, and

(b) contacting the compound of Formula 3 with a carbamoyl or thiocarbamoyl chloride of Formula 2

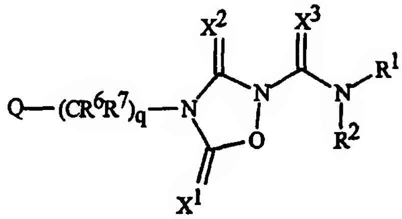


2

.

PROCESS SEQUENCE B

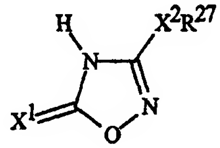
A process for preparing a compound of Formula 1



1

wherein Q, R^6, R^7, q, X^1, X^2, X^3, R^1 and R^2 are as defined above, comprising:

(a) contacting a compound of Formula 5



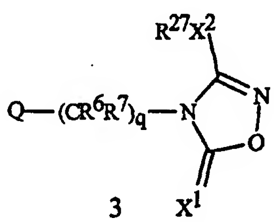
5

wherein R^{27} is $-(CR^6R^7)_q-Q$, with an alcohol of Formula 6

$$Q-(CR^6R^7)_q-OH$$

6

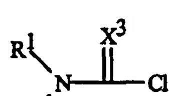
under reaction conditions involving a tertiary phosphine and an azo compound to provide a compound of Formula 3



3

, and

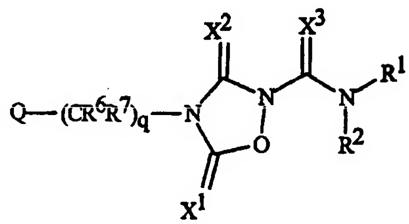
(b) contacting the compound of Formula 3 with a carbamoyl or thiocarbamoyl chloride of Formula 2



2

PROCESS SEQUENCE C

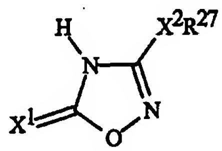
A process for preparing a compound of Formula 1



1

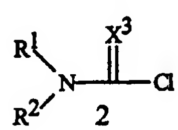
wherein Q, R^6, R^7, q, X^1, X^2, X^3, R^1 and R^2 are as defined above, comprising:

(a) contacting a compound of Formula 5



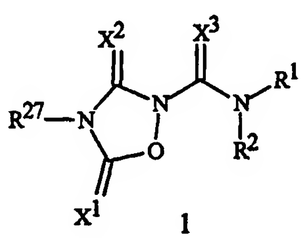
5

wherein R^{27} is $-(CR^6R^7)_q$-Q, with a carbamoyl or thiocarbamoyl chloride of Formula 2



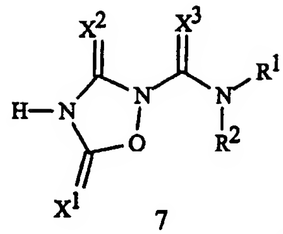
2

in the presence of a base to provide the compound of Formula 1



1

directly or a compound of Formula 7



7

, and

(b) contacting the compound of Formula 7 with an alcohol of Formula 6

$$Q—(CR^6R^7)_q—OH$$

6

under reaction conditions involving a tertiary phosphine and an azo compound or with a compound of Formula 4

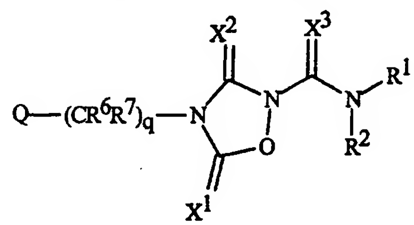
$$Q—(CR^6R^7)_q—X^4$$

4

in the presence of a base.

PROCESS SEQUENCE D

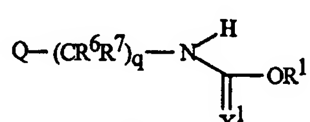
A process for preparing a compound of Formula 1



1

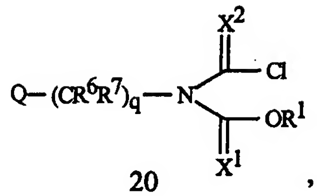
wherein Q, R^6, R^7, q, X^2, X^3, R^1 and R^2 are as defined above, and X^1 is O, comprising:

(a) contacting a compound of Formula 19



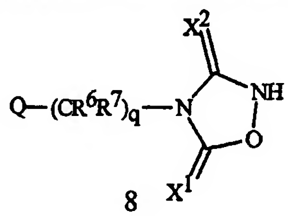
19

with phosgene or thiophosgene to provide a compound of Formula 20



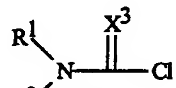
20 ,

(b) contacting the compound of Formula 20 with hydroxylamine, following by treatment with a base, and then an acid, to provide a compound of Formula 8



8 , and

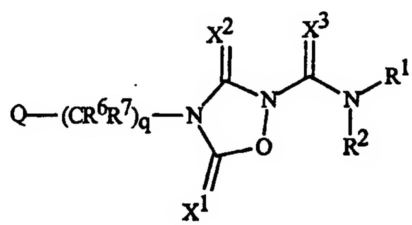
(c) contacting the compound of Formula 8 with a compound of Formula 2



2 .

PROCESS SEQUENCE E

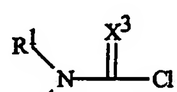
A process for preparing a compound of Formula 1



1

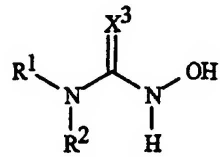
wherein Q, R^6, R^7, q, X^1, X^2, X^3, R^1 and R^2 are as defined above, comprising:

(a) contacting a compound of Formula 2



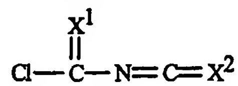
2

with hydroxylamine in the presence of a base to provide a compound of Formula 22



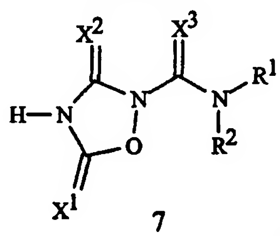
22 ,

(b) contacting the compound of Formula 22 with a compound of Formula 23



23

in the presence of a base to provide a compound of Formula 7



7 , and

(c) contacting the compound of Formula 7 with an alcohol of Formula 6

$$Q—(CR^6R^7)_q—OH$$

6

under reaction conditions involving a tertiary phosphine and an azo compound or with a compound of Formula 4

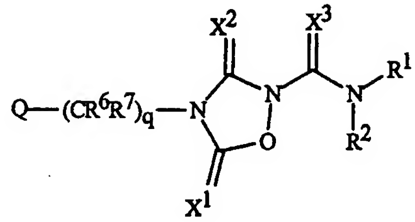
$$Q—(CR^6R^7)_q—X^4$$

4

in the presence of a base.

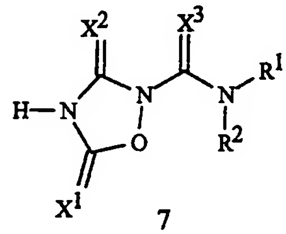
PROCESS SEQUENCE F

A process for preparing a compound of Formula 1



1

wherein Q, R^6, R^7, q, X^1, X^2, X^3, R^1 and R^2 are as defined above, comprising contacting a compound of Formula 7



7

with an orthoformate of Formula 24

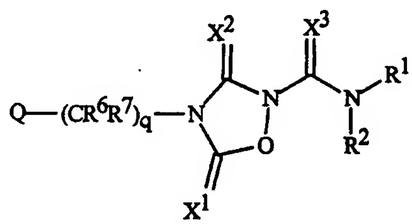
$$(R^{27}O)_3CH$$

24

wherein R^{27} is $-(CR^6R^7)_q-Q$, in the presence of a base.

<u>PROCESS SEQUENCE G</u>

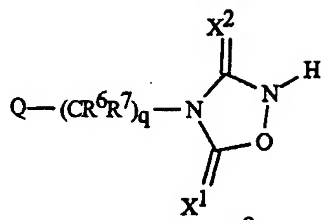
A process for preparing a compound of Formula 1



1

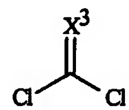
wherein Q, R^6, R^7, q, X^1, X^2, X^3, R^1 and R^2 are as defined above, comprising:

(a) contacting a compound of Formula 8



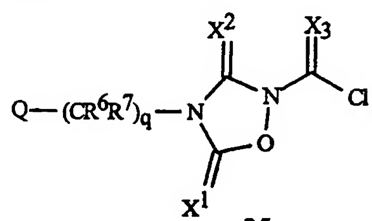
8

with a compound of Formula 26



26

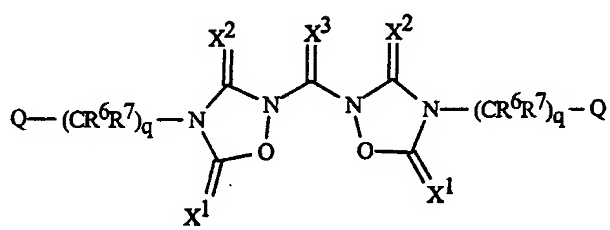
to provide a compound of Formula 25



25

,

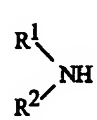
or a compound of Formula 27



27

in the presence of a catalyst such as hexamethylguanidinium chloride; and

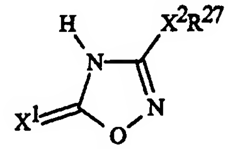
(b) contacting the compound of Formula 25 or Formula 27 with an amine of Formula 13



13

in the presence of a base.

The present invention also relates to an intermediate compound of Formula 5

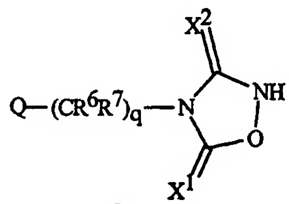


5

wherein

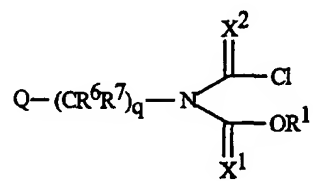
R^{27} is -$(CR^6R^7)_q$-Q; R^6, R^7, q, Q, X^1 and X^2 are as defined above for Formula 1;

provided that when X^1 and X^2 are O and q is 0, then Q is other than unsubstituted benzyl. The present invention also relates to intermediate compounds of Formula 8 and Formula 20



8

,



20

wherein

R^6, R^7, q, Q and X^2 are as defined above for Formula 1; and X^1 is O;

provided that when X^2 is O and q is 0, then Q is other than unsubstituted benzyl.

The oxadiazolidines of Formula 1 can be used alone or in combination with other commercial pesticides. The present invention also relates to certain rare combinations that surprisingly give greater-than-expected or synergistic effect, or give a less-than-additive or safening effect on crops while retaining or increasing synergistically weed control. The mixtures of compounds of Formula 1 and certain sulfonylureas have now been discovered to synergistically control weeds. Also, the mixtures of compounds of Formula 1 and safeners such as dichlormid or naphthalic anhydride have now been discovered to exhibit a crop safening effect while retaining or synergistically increasing weed control.

This invention also relates to a herbicidal composition comprising a herbicidally effective amount of a compound of Formula 1 and at least one of a surfactant, a solid diluent or a liquid diluent. The preferred compositions of the present invention are those which comprise the above preferred compounds.

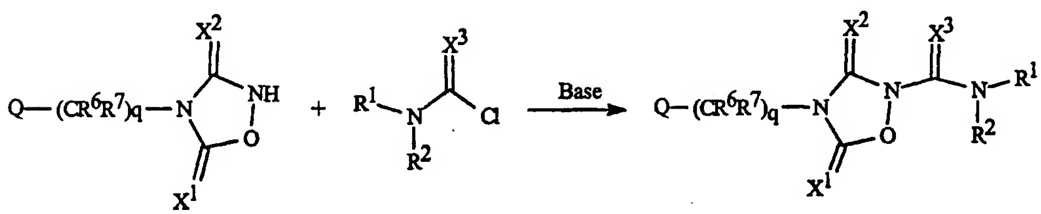
This invention also relates to a method for controlling the growth of undesired vegetation comprising contacting the vegetation or its environment with a herbicidally effective amount of a compound of Formula 1.

DETAILS OF THE INVENTION

Compounds of the Formula 1 can be readily prepared by one skilled in the art by using the reactions and techniques described in Scheme 1 to Scheme 10 below. In cases where a substituent of the starting material is not compatible with the reaction conditions described for any of the reaction schemes, the substituent can be converted to a protected form prior to the described reaction scheme and then deprotected after the reaction using commonly accepted protection/deprotection techniques (see Green, T. W and Wuts, P. G., *Protecting Groups in Organic Transformations*, 2nd Edition, John Wiley and Sons, New York, 1991). Otherwise, alternative approaches known to one skilled in the art are available. The definitions of Q, X^1, X^2, X^3, R^1, R^2, R^6, R^7, and q in compounds of Formulae 1-21 below are as defined in the Summary of the Invention.

As shown in Scheme 1, compounds of Formula 1 can be obtained by the reaction of oxadiazolidines of Formula 8 with carbamyl chlorides of Formula 2. The preferred solvent for the carbamoylation reaction is an inert solvent such as tetrahydrofuran, toluene, benzene or dioxane. The presence of a tertiary amine base such as triethylamine or diisopropylethylamine is preferable. Use of an acylation catalyst such as 4-dimethylaminopyridine or 4-pyrrolidinopyridine in a catalytic or stoichiometric amount is preferred. Other bases such as alkali hydroxide, carbonates or hydrides may also be employed. The reaction can be carried out at temperatures between 20 to 150 °C.

SCHEME 1

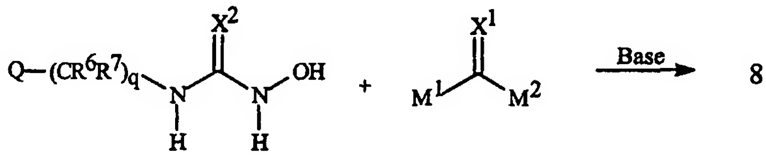


8 2 1

Oxadiazolidines of Formula 8 can be prepared by methods known in the literature. Zinner reported the preparation of a wide variety of oxadiazolidines. See, for example: *Arch. Pharm.* (1965), *298*, 580-587; *Arch. Pharm.* (1971), *303*, 139-144, German patent application, DE 2010396 (1971). As shown in Scheme 2, a hydroxyurea or hydroxythiourea of Formula 9 is reacted with an activated carbonyl or thiocarbonyl compound of Formula 10 in the presence of a base to give compounds of Formula 8. Examples of suitable activated carbonyl compounds are ethyl chloroformate, phenyl chloroformate, carbonyl diimidazole, phosgene, diphosgene or triphosgene. Examples of suitable activated thiocarbonyl

compounds are carbon disulfide, thiophosgene and thiocarbonyldiimidazole. Suitable bases include alkali carbonates, tertiary amines such as triethylamine and alkali hydroxides. The reaction can be carried out in a variety of solvents including tetrahydrofuran, toluene, dichloromethane, chloroform, acetonitrile or dioxane. The reaction may also be carried out in two-phase mixtures of water and an organic solvent such as dichloromethane, ethyl acetate or toluene. Depending on the reactivity of the carbonyl or thiocarbonyl compound, the reaction may be carried out at temperatures from 0 to 150 °C.

SCHEME 2

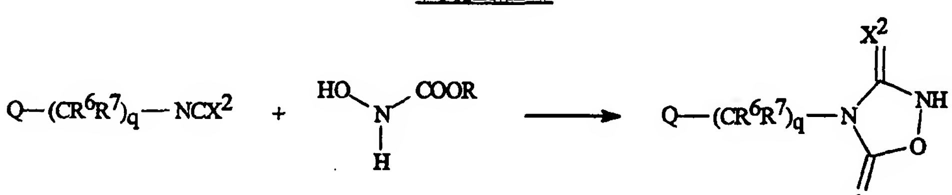


9 10

M^1, M^2 is halogen, phenoxy, OCH_3, OC_2H_5 or imidazole

As shown in Scheme 3, compounds of Formula 8a wherein X^1 and X^2 are O can be made via the method of Zinner, *Arch. Pharm.* (1981), *314*, 294-302. The reaction of isocyanates of Formula 11 with hydroxyurethanes of Formula 12 gives compounds of Formula 8a. The cyclization can be carried out in a variety of solvents such as acetone, dichloromethane, tetrahydrofuran, dioxane, ethyl acetate, and other solvents inert to isocyanates. The presence of a base such as triethylamine or sodium hydroxide is also useful. The reaction may be carried out at temperatures from 20 to 150 °C.

SCHEME 3

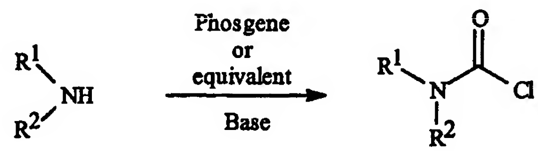


11 12 (R is alkyl, allyl or aryl) 8a (wherein X^1 and X^2 are O)

Carbamyl chlorides of Formula 2a (which are compounds of Formula 2 wherein X^3 is O) are well known in the literature and can be made by the reaction of amines of Formula 13 with phosgene or a phosgene equivalent such as di- or triphosgene as shown in Scheme 4. The presence of a base is useful and the use of hindered tertiary amines such as

diisopropylethyl amine is preferred. The reaction can be carried out in a variety of solvents such as toluene or benzene that are inert to phosgene and its equivalents. The reaction can be carried out at temperatures from 0 to 120 °C.

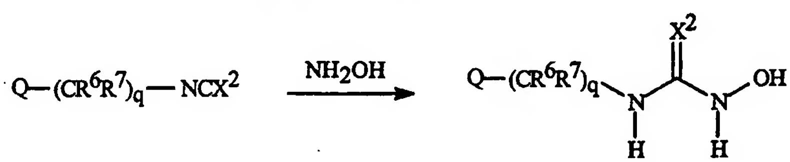
SCHEME 4



13 2a

As shown in Scheme 5, hydroxyureas and thioureas of Formula 9 can be prepared from the reaction of hydroxylamine with isocyanates or isothiocyanates of Formula 11. The reaction is carried out in a two-phase reaction medium consisting of water and an organic solvent such as toluene, benzene, dichloroethane, dichloromethane, ethyl acetate or chlorobutane. The hydroxylamine employed can be a commercially available aqueous solution or can be prepared *in situ* from the reaction of an acid addition salt of hydroxylamine with an alkali hydroxide or carbonate. The reaction is generally carried out at temperatures between 0 and 40 °C.

SCHEME 5



11 9

Isocyanates of Formula 11a are commercially available or can be prepared from amines of Formula 14 as shown in Scheme 6. The reaction of phosgene or its equivalents (such as di- and triphosgene) with amines or amine hydrochlorides of Formula 14 gives the isocyanates of Formula 11a. This reaction is well known in the literature and can be carried out in a variety of solvents such as toluene, benzene, ethyl acetate or dichloroethane which are inert to phosgene. Depending upon the reactivity of the amine of Formula 14, the reaction may be carried out at temperatures from 0 to 200 °C.

SCHEME 6

$$\underset{14}{Q\!-\!(CR^6R^7)_q\!-\!NH_2} \xrightarrow[\text{equivalent}]{\text{Phosgene or}} \underset{11a\ (\text{wherein } X^2 \text{ is O})}{Q\!-\!(CR^6R^7)_q\!-\!N\!=\!C\!=\!X^2}$$

As shown in Scheme 7, isocyanates of Formula 11a can also be formed from activated acids of Formula 15. Acid halides, anhydrides, imidazolides and the like can be reacted with various azides to provide, after a Curtius rearrangement, the isocyanates of Formula 11a. The azide used may be an alkali azide, trialkylsilyl azide or trialkylstannyl azide. The reaction may be carried out in solvents such as toluene, tetrahydrofuran, ethyl acetate, dioxane, benzene, or methyl tert-butyl ether. When an alkali azide is employed, biphasic aqueous solvents or miscible aqueous containing mixtures are preferred in the formation of the acyl azide intermediate. For further examples of Curtius rearrangements, see: March, J. *Advanced Organic Chemistry,* 3rd edition; John Wiley & Sons, 1985; pp 984-985 and 380. See also Kim, World Patent Application 98/51683 (1998) and Larock, *Comprehensive Organic Transformations*, VCH, 1989, pp 931-932.

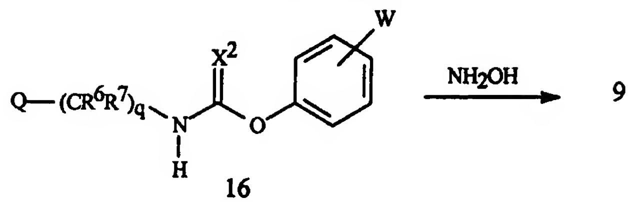
SCHEME 7

$$\underset{15}{Q\!-\!(CR^6R^7)_q\!-\!COT} \xrightarrow{M\text{-}N_3} \underset{11a\ (\text{wherein } X^2 \text{ is O})}{Q\!-\!(CR^6R^7)_q\!-\!N\!=\!C\!=\!X^2}$$

T is halogen, imidazole, etc.
M is alkali metal, trialkylsilyl or trialkylstannyl

As shown in Scheme 8, compounds of Formula 9 can also be made by the reaction of compounds of Formula 16 with hydroxylamine. The reaction may be carried out in a number of different solvents including tetrahydrofuran, dioxane, acetonitrile, dimethylformamide and dimethylsulfoxide. Temperatures from 0 to 160 °C may be employed in this transformation. Many compounds of Formula 16 are known, and can be made by the reaction of commercially available chloroformates and chlorothioformates with compounds of Formula 14.

SCHEME 8

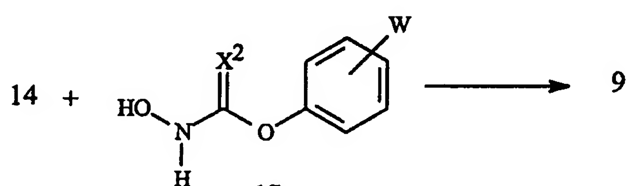


16

(W is H, halogen or NO_2)

As shown in Scheme 9, compounds of Formula 9 can also be made by the reaction of activated hydroxylamines of Formula 17 with amines of Formula 14. The reaction may be carried out in a number of different solvents including tetrahydrofuran, dioxane, acetonitrile, dimethylformamide and dimethylsulfoxide. In some cases lower alcohols or even mixtures of water and alcohols may also be employed. Temperatures from 0 to 160 °C may be employed in this transformation. Compounds of Formula 17 are known in the literature and can be made from hydroxylamine and activated esters or thioesters (See Oesper and Broker, *J. Am. Chem. Soc.*, 1925, *47*, 2607; Defoin et. al., *Helv. Chim. Acta.*, 1992, *75*, 109-123; and Stewart and Brooks, *J. Org. Chem.*, 1992, *57*, 5020-5023).

SCHEME 9

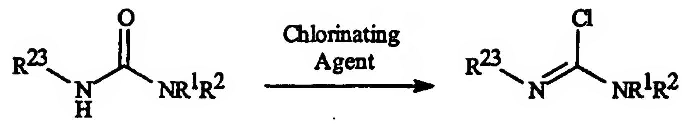


17

(W is H, halogen or NO_2)

Compounds of Formula 2b (which are compounds of Formula 2 wherein X^3 is NR^{23}) can be made by the chlorination of ureas of Formula 18 as shown in Scheme 10. The chlorination may be carried out with a wide variety of reagents such as phosphorus oxychloride, thionyl chloride, phosphorous pentachloride, or triphenylphosphine reagents with carbon tetrachloride or chlorine. A variety of solvents may be used including halogenated solvents such as dichloromethane, dichloroethane, or trichloroethane. A preferred solvent of the transformation is dimethylformamide. The reaction may be carried out from 0 to 150 °C. Some known chloroamidine compounds and their synthesis may be found in Reid, *Chem. Ber.*, 1975, *108*, 2290-2299.; Kuehle et al.; *Angew. Chem.*; 1969; *81*; 18; and Shevchenko,V.I. et al.; *J. Gen. Chem. USSR* (Engl.Transl.); 1976; *46*; 535-539.

SCHEME 10



18

2b

Wherein X^3 is NR^{23}

Many isothiocyanates of Formula 11a are commercially available. Amines of Formula 13 are commercially available or can be prepared by methods disclosed in the literature. See the following references and references cited therein for synthesis of these materials: Kim, World Patent Application 98/51683 (1998); Dhar, World Patent Application 98/35961 (1998); Rorer, World Patent Application 98/25912 (1998); and Morita et. al., World Patent Application WO 98/11079 (1998).

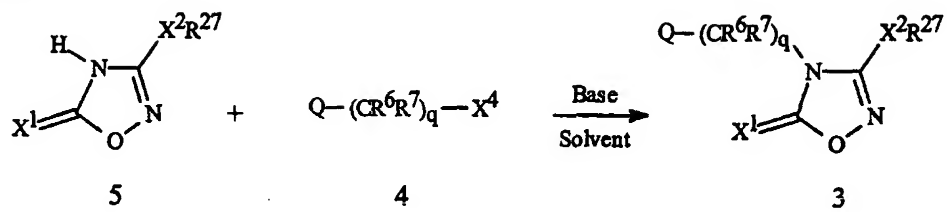
Amines of Formula 14 are commercially available or can be synthesized by methods known in the art. See the following references and references cited therein for synthesis of these materials: Kim, World Patent Application 98/51683 (1998); Dhar, World Patent Application 98/35961(1998); Rorer, World Patent Application 98/25912 (1998), Goto et. al., European Patent Application EP 695748 (1996); Goto et. al., European Patent Application EP 771,797 (1997); and Goto et. al. US patent 5,589,439 (1996).

Activated carboxylic acids of Formula 10 are commercially available or can be prepared by methods disclosed in the literature. See the following references and references cited therein for the synthesis of these materials: Kim, World Patent Application 98/51683 (1998); Dhar, World Patent Application 98/35961(1998); Rorer World Patent Application 98/25912 (1998); and Goto et. al., European Patent Application EP 695748 (1996). See also Larock, *Comprehensive Organic Transformations*, VCH, 1989, p 821 for a list of comprehensive references for the synthesis and chemistry of carboxylic acids and activated derivatives.

This invention is further directed to processes for the preparation of compounds of Formula 1 using process sequences described below.

PROCESS SEQUENCE A

STEP 1



Step 1 forms compounds of Formula 3 by contacting compounds of Formula 5 with compounds of Formula 4 in the presence of a suitable base either neat or in a suitable solvent.

Compounds of Formula 5 may be prepared, for example, by methods described in *Synthesis*, 1991, 265.

For Step 1, the reaction temperature is generally from -10 to 250 °C, preferably from 0 to 100 °C. The reaction times are generally from 0.25 to 48 h, preferably from 0.25 to 24 h. Generally, the pressure is in the range of 1.013 x 10^2 to 2.026 x 10^2 KPa, preferably ambient pressure. Suitable solvents include typical organic solvents in which the reactants can be dissolved and the process of Step 1 can proceed without interference. Examples of such reactants include aromatics such as benzene, toluene, xylene, chlorobenzene and dichlorobenzene, ethers such as dioxane and tetrahydrofuran, nitriles such as acetonitrile and propionitrile, ethyl acetate, dichloromethane, dichloroethane, and polar aprotic solvents such as dimethylformamide and dimethylsulfoxide.

Suitable bases include organic trialkylamines such as trimethylamine, triethylamine, diisopropylethylamine, tributylamine and the like, dimethylaniline, *N,N*-dimethylamino-pyridine, *N*-methylmorpholine, 1,8-diazabicyclo[5.4.0]undec-7-ene, 1,4-diazabicyclo[2.2.2]octane and 1,5-diazabicyclo[4.3.0]non-5-ene. 1,8-Diazabicyclo[5.4.0]-undec-7-ene is a particularly useful organic base for this reaction. Inorganic bases include, but are not limited to, potassium carbonate, sodium carbonate, potassium hydride, sodium hydride, lithium carbonate and cesium carbonate.

A phase transfer catalyst can accelerate the reaction in the presence of inorganic bases. Phase transfer catalysts include tetraalkylammonium halides, crown ethers, phosphonium salts, silicon analogs of crown ethers and acyclic analogs of crown ethers. Particularly useful as a base is the combination of potassium carbonate and a phase transfer catalyst.

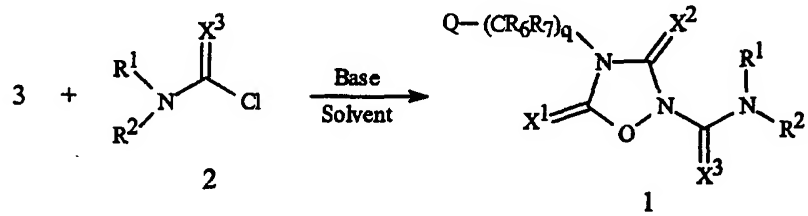
Generally at least an equimolar amount of the Formula 4 compound is used in respect to the Formula 5 compound, and preferably at least a small molar excess of the Formula 4 compound is used. More particularly, the molar ratio of the Formula 4 compound to the

Formula 5 compound is usually in the range of 1.05:1 to 10:1. In most cases, the molar ratio of the Formula 5 compound to the Formula 4 compound is preferably in the range of 1.1:1 to 1.5:1. Generally at least an equivalent of base is used in respect to the Formula 5 compound, and preferably at least a small equivalent excess of the base is used. More particularly, the ratio of the number of equivalents of base to number of moles of the Formula 5 compound is usually in the range of 1.05:1 to 10:1. In most cases, the ratio of the number of equivalents of base to number of moles of the Formula 5 compound is preferably in the range of 1.1:1 to 1.5:1. The equivalent amount of base may be similar to the molar amount of the Formula 4 compound, but this is not necessary.

The compound of Formula 4 is preferably added to the reaction mixture containing the compound of Formula 5 and a base either neat or in a solvent. The reaction temperature is maintained during and after the addition and until the reaction reaches completion.

Isolation of product of Step 1 can be accomplished by standard workup procedures or the resultant mixture can be used directly in Step 2.

STEP 2



Step 2 forms compounds of Formula 1 from the reaction of compounds of Formula 3 with compounds of Formula 2 in the presence of a suitable base in a suitable solvent.

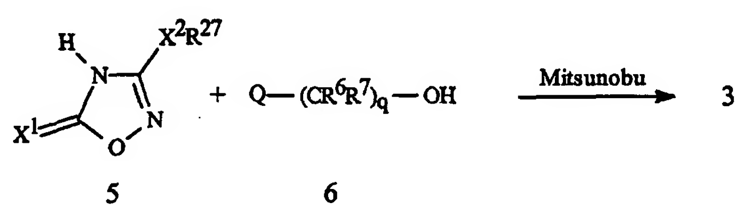
For Step 2, the general and preferred reaction conditions are the same as the ones described above for Step 1.

Alternatively, the processes of Step 1 and 2 can be combined without isolating product of Step 1 and preferably, the reaction conditions (e.g. temperature, mole ratio, reaction time etc) are balanced to achieve a high yield of compound of Formula 1.

The compound of Formula 1 can be isolated by standard procedures.

PROCESS SEQUENCE B

STEP 1



Step 1 forms the compounds of Formula 3 from the reaction of compounds of Formula 5 with compounds of Formula 6 under Mitsunobu reaction conditions involving a tertiary phosphine and an azo compound. One skilled in the art can find a variety of the tertiary phosphine and azo compounds as well as solvents useful for this transformation in *Synthesis*, 1981, 1 and *Org. Reactions*, 1992, *42*, 335.

For the process of Step 1, the reaction temperature is generally from about –40 to 250 °C, preferably from –20 to 80 °C. The reaction times are generally from about 0.20 to 24 h, preferably from 0.5 to 12 h. Generally, the pressure is from 1.013×10^2 to 5.065×10^2 KPa; preferably ambient pressure.

Generally at least an equimolar amount of the Formula 5 compound is used in respect to the Formula 6 compound, and preferably at least a small molar excess of the Formula 6 compound is used. More particularly, the molar ratio of the Formula 6 compound to the Formula 5 compound is usually in the range of 1.05:1 to 10:1. In most cases, the molar ratio of the Formula 6 compound to the Formula 5 compound is preferably in the range of 1.1:1 to 1.5:1.

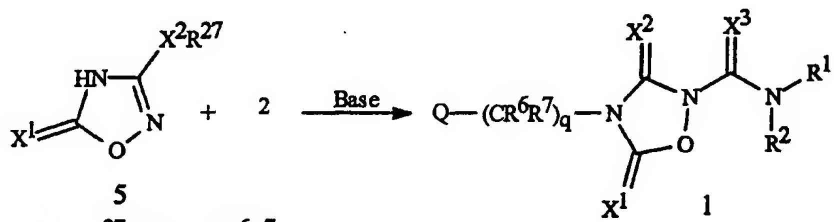
Isolation of product of Step 1 can be accomplished by standard workup procedures.

STEP 2

Compounds of Formula 1 are then obtained by the reaction of the compounds of Formula 3 prepared in Step 1 and compounds of Formula 2 under the same reaction conditions as already described in Step 2 for Sequence A.

PROCESS SEQUENCE C

STEP 1a



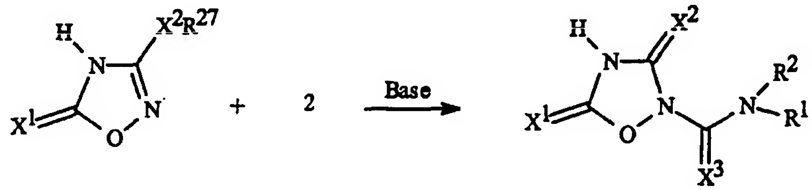
wherein R^{27} is Q—$(CR^6R^7)_q$—

Step 1a forms the compounds of Formula 1 by contacting compounds of Formula 5 with compounds of Formula 2 in the presence of a suitable base either neat or in a suitable solvent.

For the process of Step 1a, the general and preferred reaction conditions are the same as the ones described above for Step 1 in Process Sequence A.

A solution of compound of Formula 2 can be added to a solution/suspension of compound of Formula 5 and a base in a solvent. Reaction temperature is maintained during and after the addition and until the reaction reaches completion. Isolation of product of Step 1a can be accomplished by standard workup procedures.

STEP 1b



5 7

Step 1b forms the compounds of Formula 7 from the reaction of compounds of Formula 5 and compounds of Formula 2 in the presence of a base either neat or in a suitable solvent.

For the process of Step 1b, the general and preferred reaction conditions are the same as the ones described above for Step 1 in Process Sequence A.

The product of Step 1b can be isolated by standard workup procedures.

STEP 2a

$$7 \quad + \quad \underset{6}{Q\text{—}(CR^6R^7)_q\text{—}OH} \quad \xrightarrow{\text{Mitsunobu}} \quad 1$$

Step 2a forms the compounds of Formula 1 from the reaction of compounds of Formula 7 and compounds of Formula 6 under Mitsunobu reaction conditions involving a tertiary phosphine and an azo compound. One skilled in the art can find a variety of the tertiary phosphine and azo compounds as well as solvents useful for this transformation in *Synthesis*, 1981, 1 and *Org. Reactions*, 1992, *42*, 335.

For the process of Step 2a, the reaction temperature is generally from about –40 to 250 °C, preferably from –20 to 80 °C. The reaction times are generally from about 0.20 to 24 h, preferably from 0.5 to 12 h. Generally, the pressure is from 1.013×10^2 to 5.065×10^2 KPa; preferably ambient pressure.

Generally at least an equimolar amount of the Formula 7 compound is used in respect to the Formula 6 compound, and preferably at least a small molar excess of the Formula 6 compound is used. More particularly, the molar ratio of the Formula 6 compound to the Formula 7 compound is usually in the range of 1.05:1 to 10:1. In most cases, the molar ratio

of the Formula 7 compound to the Formula 6 compound is preferably in the range of 1.1:1 to 1.5:1.

Isolation of product of Step 2a can be accomplished by standard workup procedures.

STEP 2b

$$\underset{}{7} + \underset{4}{Q{-}(CR^6R^7)_q{-}X^4} \xrightarrow{\text{Base}} 1$$

Step 2b forms compounds of Formula 1 by contacting compounds of Formula 7 with compounds of Formula 4 in the presence of a suitable base either neat or in a suitable solvent.

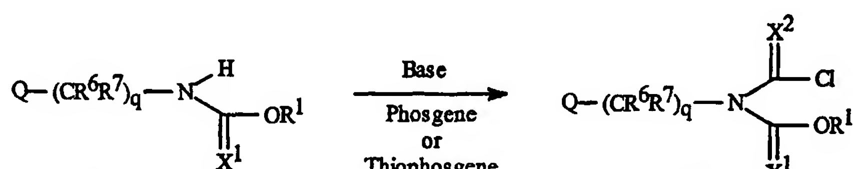
For the process of Step 2b, the general and preferred reaction conditions are similar to the ones described above for Step 1 in Process Sequence A.

Isolation of product of Step 2b can be accomplished by standard workup procedures.

PROCESS SEQUENCE D

Compounds of the Formula 8 can be readily prepared by one skilled in the art by using the reactions and techniques described in Steps 1 and 2. In cases where a substituent of the starting material is not compatible with the reaction conditions described for any of the reaction schemes, the substituent can be converted to a protected form prior to the described reaction scheme and then deprotected after the reaction using commonly accepted protection/deprotection techniques (see Green, T. W. and Wuts, P. G., *Protecting Groups in Organic Transformations*, 2nd Edition, John Wiley and Sons, New York, 1991). Otherwise, alternative approaches known to one skilled in the art are available.

STEP 1

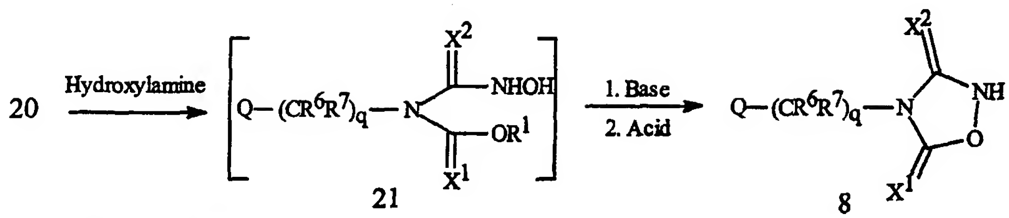


19 20

(wherein X^1 is O)

Step 1 forms compounds of Formula 20 from the reaction of compounds of Formula 19 with phosgene or thiophosgene in the presence of a base. For general reaction conditions for this transformation, see: U.S. Patent Number 5,602,251. Compounds of Formula 19 are well known in the literature. See: for example, *J. Chem. Soc. Perkin I* (1997), 1041.

STEP 2



(wherein X^2 is O or S and X^1 is O)

Step 2 forms compounds of Formula 8 in the form of a salt by treatment of compounds of Formula 20 with hydroxylamine and a base. The salt is then converted to compound of Formula 8 by treatment with an acid.

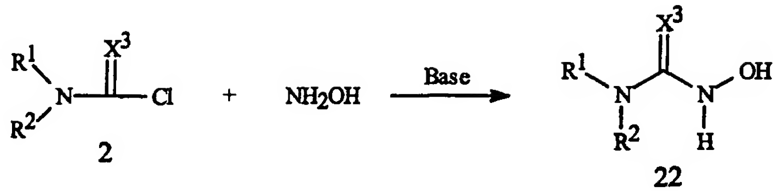
The reaction is conducted in a suitable organic solvent such as, but not limited to, tetrahydrofuran, dioxane or toluene at a temperature between – 20 and 100 °C with 10-50 °C being the preferred temperature. Hydroxylamine may be generated from one of its salts by use of a suitable base such as, but not limited to, potassium carbonate, potassium hydroxide or sodium hydroxide. Alternatively, hydroxylamine in water may be used. Judicious use of an appropriate co-solvent such as water or a phase transfer catalyst may be effective in facilitating the reaction. Further amounts of the base (vide supra) can be added to scavenge the HCl formed in the reaction. Alternatively, an excess amount of hydroxylamine can be used to achieve the same purpose.

The intermediate compound of Formula 21 is not usually isolated, but converted directly to compounds of Formula 8 by addition of further quantities of base. It is apparent to one skilled in the art that salts of compounds of Formula 8 generated from this reaction may be used directly in the preparation of compounds of Formula 1 as described in Scheme 1. To facilitate the transformation, it may be desirable to adjust the solvent composition by removal of co-solvents such as water prior to the reaction. Alternatively, compounds of Formula 8 may be isolated from their salts by addition of an appropriate mineral acid such as, but not limited to, HCl before being subjected to the reaction conditions as described in Scheme 1 to produce compounds of Formula 1.

PROCESS SEQUENCE E

Compounds of the Formula 7 can be readily prepared by one skilled in the art by using the reactions and techniques described in Steps 1 and 2. Since hydroxylamine is unstable upon heating, this sequence allows a safe and efficient route to the compounds of the Formula 7 under mild conditions.

STEP 1



Step 1 forms the compounds of Formula 22 by contacting a compound of Formula 2 with hydroxylamine in the presence of a suitable base in a suitable solvent. Hydroxylamine may be generated from one of its salts or hydroxylamine in water may be used.

For Step 1, the reaction temperature is generally from -10 to 150 °C, preferably from 0 to 100 °C. The reaction times are generally from 0.10 to 24 h, preferably from 0.10 to 2 h. Generally, the pressure is in the range of 1.013×10^2 to 2.026×10^2 KPa; preferably ambient pressure. Suitable solvents include typical organic solvents in which the reactants can be dissolved and the process of Step 1 can proceed without interference. Examples of such solvents include aromatics such as benzene, toluene, xylene, chlorobenzene and dichlorobenzene, ethers such as dioxane and tetrahydrofuran, nitriles such as acetonitrile and propionitrile, ethyl acetate, dichloromethane, dichloroethane, and polar aprotic solvents such as dimethylformamide and dimethylsulfoxide. Judicious use of an appropriate co-solvent such as water or a phase transfer catalyst may be effective in facilitating the reaction.

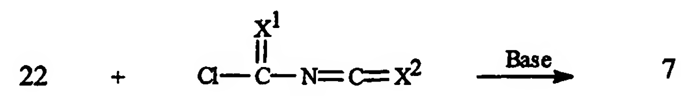
Suitable bases include organic trialkylamines such as trimethylamine, triethylamine, diisopropylethylamine, tributylamine and the like, dimethylaniline, *N,N*-dimethylaminopyridine, *N*-methylmorpholine, 1,8-diazabicyclo[5.4.0]undec-7-ene, 1,4-diazabicyclo[2.2.2]octane and 1,5-diazabicyclo[4.3.0]non-5-ene. Trialkylamines is a particularly useful organic base for this reaction. When an excess quantity of hydroxylamine is employed, the excess hydroxylamine can also serve as a base. Inorganic bases include, but are not limited to, potassium hydroxide, sodium hydroxide, potassium carbonate, sodium carbonate, lithium carbonate and cesium carbonate.

Generally at least an equimolar amount of the Formula 2 compound is used in respect to hydroxylamine, and preferably at least a small molar excess of hydroxylamine is used. More particularly, the molar ratio of the Formula 2 compound to hydroxylamine is usually in the range of 1:1.05 to 1:10. In most cases, the molar ratio of the Formula 2 compound to hydroxylamine is preferably in the range of 1:1.1 to 1:1.5. Generally at least an equivalent of base is used in respect to the Formula 2 compound, and preferably at least a small equivalent excess of the base is used. More particularly, the ratio of the number of equivalents of base to number of moles of the Formula 2 compound is usually in the range of 1.05:1 to 10:1. In most cases, the ratio of the number of equivalents of base to number of

moles of the Formula 2 compound is preferably in the range of 1.1:1 to 1.5:1. The equivalent amount of base may be similar to the molar amount of the Formula 2 compound, but this is not necessary.

Isolation of product of Step 1 can be accomplished by standard workup procedures. In the scenario that the reaction is carried our in an aqueous solution, a filtration can be employed to collect compounds of Formula 22.

STEP 2



23

Compounds of Formula 7 are synthesized by contacting compounds of Formula 22 with chlorocarbonyl isocyanate (X^1 and X^2 are O) or chlorocarbonyl isothiocyanate (X^1 is O and X^2 is S) or chlorothiocarbonyl isocyanate (X^1 is S and X^2 is O) or chlorothiocarbonyl isothiocyanate (X^1 and X^2 are S) in the presence of a base to scavange the HCl byproduct. Similar examples of such reactions using *N*-alkyl-*N*-hydroxylamine and chlorocarbonyl isocyanate have been reported in *Syn.*, 1982, 781-2 and in WO 9741097 but there is no example of compound like 22 and chlorocarbonyl isocyanate in the literature.

Compounds of Formula 23 are either commercially available or may be prepared by one skilled in the art using methods known in the art (or slight modification of these methods); for example, see: *Chem. Ber.* 1981, *114*, 1746-51, *Chem. Ber.* 1973, *106*, 1487-95, and *Chem. Ber.* 1966, *99*, 3572-81.

For Step 2, the reaction temperature is generally from -10 to 150 °C, preferably from 0 to 100 °C. The reaction times are generally from 0.10 to 24 h, preferably from 0.10 to 2 h. Generally, the pressure is in the range of 1.013×10^2 to 2.026×10^2 KPa; preferably ambient pressure. Suitable solvents include typical organic solvents in which the reactants can be dissolved and the process of Step 1 can proceed without interference. Examples of such reactants include aromatics such as benzene, toluene, xylene, chlorobenzene and dichlorobenzene, ethers such as dioxane and tetrahydrofuran, nitriles such as acetonitrile and propionitrile, ethyl acetate, dichloromethane, dichloroethane, and polar aprotic solvents such as dimethylformamide and dimethylsulfoxide.

Suitable bases for Step 2 are similar to the ones described above for Step 1.

Generally at least an equimolar amount of the Formula 22 compound is used in respect to the Formula 23 compound, and preferably at least a small molar excess of the Formula 23 compound is used. More particularly, the molar ratio of the Formula 22

compound to the Formula 23 compound is usually in the range of 1:1.05 to 1:10. In most cases, the molar ratio of the Formula 22 compound to the Formula 23 compound is preferably in the range of 1:1.1 to 1:1.5. Generally at least an equivalent of base is used in respect to the Formula 22 compound, and preferably at least a small equivalent excess of the base is used. More particularly, the ratio of the number of equivalents of base to number of moles of the Formula 22 compound is usually in the range of 1.05:1 to 10:1. In most cases, the ratio of the number of equivalents of base to number of moles of the Formula 22 compound is preferably in the range of 1.1:1 to 1.5:1. The equivalent amount of base may be similar to the molar amount of the Formula 22 compound, but this is not necessary.

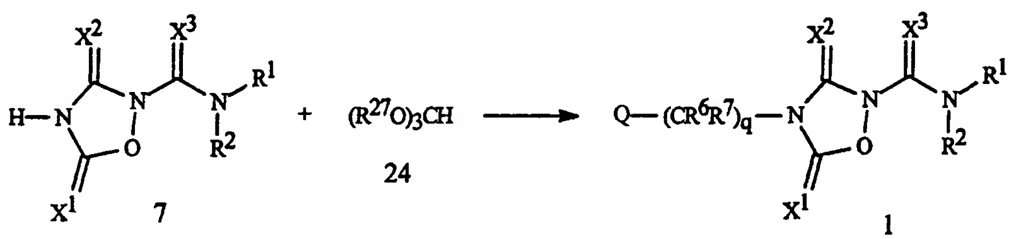
Isolation of product of Step 2 can be accomplished by standard workup procedures.

Compounds 7 can be readily converted into alkali salts when treated with potassium carbonate or sodium carbonate in water. The salts may be useful in alkylation reactions.

Compounds of Formula 1 are then obtained by the reaction of compounds of Formula 7 under the same reaction conditions as already described in Step 2a/2b in Sequence C.

PROCESS SEQUENCE F

Compounds of the Formula 1 can be readily prepared by one skilled in the art by using the reactions and techniques described in the scheme below.



wherein R^{27} is $-(CR^6R^7)-Q$

The compounds of Formula 1 are formed by contacting a compound of Formula 7 with an orthoformate of Formula 24 either neat or in the presence of a suitable solvent.

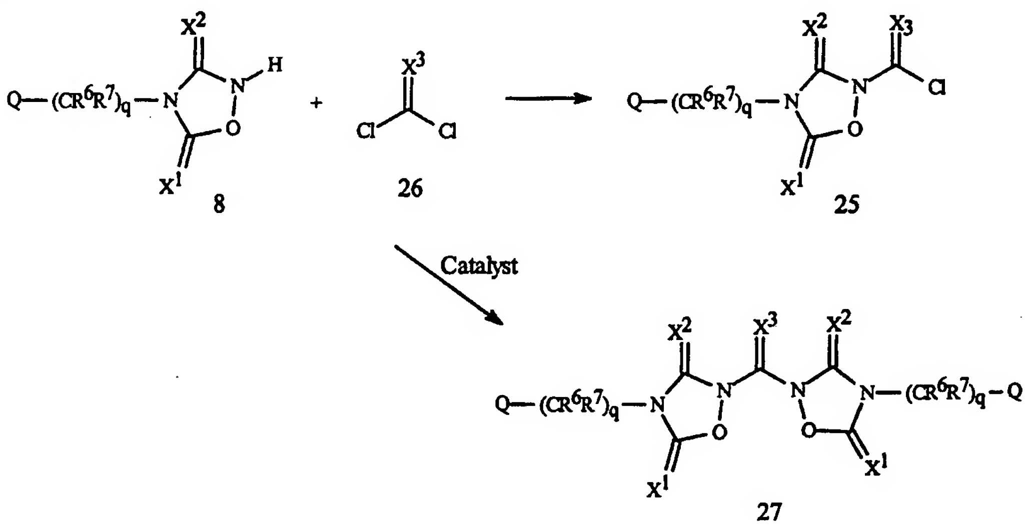
The reaction temperature is generally from -10 to 150 °C, preferably from 0 to 100 °C. The reaction times are generally from 0.10 to 24 h, preferably from 0.10 to 2 h. Generally, the pressure is in the range of 1.013 x 10^2 to 2.026 x 10^2 KPa; preferably ambient pressure. Suitable solvents include typical organic solvents in which the reactants can be dissolved and the process can proceed without interference. Examples of such reactants include aromatics such as benzene, toluene, xylene, chlorobenzene and dichlorobenzene, ethers such as dioxane and tetrahydrofuran, nitriles such as acetonitrile and propionitrile, ethyl acetate, dichloromethane, dichloroethane, and polar aprotic solvents such as dimethylformamide and dimethylsulfoxide.

Generally at least an equimolar amount of the Formula 24 compound is used in respect to the Formula 7 compound, and preferably at least a small molar excess of Formula 24 compound is used. More particularly, the molar ratio of the Formula 7 compound to the Formula 24 compound is usually in the range of 1:1.05 to 1:10. In most cases, the molar ratio of the Formula 7 compound to the Formula 24 compound is preferably in the range of 1:1.1 to 1:1.5.

PROCESS SEQUENCE G

Compounds of the Formula 1 can be readily prepared by one skilled in the art by using the reactions and techniques described in Steps 1 and 2.

STEP 1



Step 1 forms the compounds of Formula 25 by contacting a compound of Formula 8 with a compound of Formula 26 either neat or in a suitable solvent.

For Step 1, the reaction temperature is generally from -10 to 150 °C, preferably from 0 to 100 °C. The reaction times are generally from 0.10 to 24 h, preferably from 0.10 to 2 h. Generally, the pressure is in the range of 1.013×10^2 to 2.026×10^2 KPa; preferably ambient pressure. Suitable solvents include typical organic solvents in which the reactants can be dissolved and the process of Step 1 can proceed without interference. Examples of such reactants include aromatics such as benzene, toluene, xylene, chlorobenzene and dichlorobenzene, ethers such as dioxane and tetrahydrofuran, nitriles such as acetonitrile and propionitrile, ethyl acetate, dichloromethane and dichloroethane.

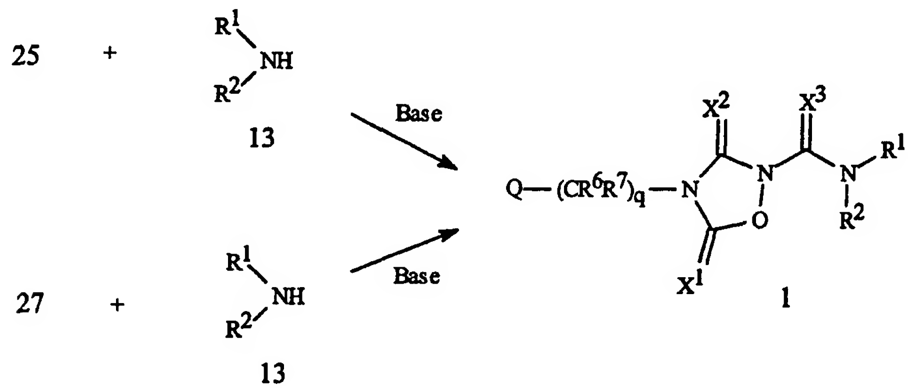
Generally at least an equimolar amount of the Formula 26 compound is used in respect to the Formula 8 compound, and preferably at least a small molar excess of the Formula 26 compound is used. More particularly, the molar ratio of the Formula 8

compound to the Formula 26 compound is usually in the range of 1:1.05 to 1:10. In most cases, the molar ratio of the Formula 8 compound to the Formula 26 compound is preferably in the range of 1:1.1 to 1:1.5.

In the presence of a catalyst such as hexamethylguanidinium chloride, the reaction of compounds of Formula 8 and compounds of Formula 26 produces compounds of Formula 27. For general and preferred conditions, see *Tet. Lett.* 1987, 5823-5826.

Isolation of product of Step 1 can be accomplished by standard workup procedures.

STEP 2



Compounds of Formula 1 are synthesized by contacting compounds of either Formula 25 or Formula 27 with amines of Formula 13 in the presence of a suitable base in a suitable solvent.

For Step 2, the general and preferred reaction conditions are the same as the ones described above for Step 1 in Process Sequence A.

One skilled in the art will recognize that, in some cases, after the introduction of a given reagent as it is depicted in any individual scheme, it may be necessary to perform additional routine synthetic steps not described in detail to complete the synthesis of compounds of Formula 1. One skilled in the art will also recognize that it may be necessary to perform a combination of the steps illustrated in the above schemes in an order other than that implied by the particular sequence presented to prepare the compounds of Formula 1.

One skilled in the art will also recognize that compounds of Formula 1 and the intermediates described herein can be subjected to various electrophilic, nucleophilic, radical, organometallic, oxidation, and reduction reactions to add substituents or modify existing substituents.

Without further elaboration, it is believed that one skilled in the art using the preceding description can utilize the present invention to its fullest extent. The following

Examples are, therefore, to be construed as merely illustrative, and not limiting of the disclosure in any way whatsoever. Percentages are by weight except for chromatographic solvent mixtures or where otherwise indicated. Parts and percentages for chromatographic solvent mixtures are by volume unless otherwise indicated. ^{1}H NMR spectra are reported in ppm downfield from tetramethylsilane; s = singlet, d = doublet, t = triplet, q = quartet, m = multiplet, dd = doublet of doublets, dt = doublet of triplets, br s = broad singlet.

EXAMPLE 1

Step A: Preparation of *N*-(2,4-dichlorophenyl)-*N'*-hydroxyurea

A solution of 14.2 g (75 mmol) of 2,4-dichlorophenylisocyanate in 50 mL of toluene was added to a mixture of 8.26 g (120 mmol) of hydroxylamine hydrochloride and 4.8 g (120 mmol) of sodium hydroxide in a two-phase solvent mixture consisting of 50 mL of water and 50 mL of toluene. The resulting mixture was stirred at 25 °C for 30 minutes and filtered. The solid thus obtained was washed with water and then dissolved in 200 mL of ethyl acetate. The solution was dried over magnesium sulfate and the solvent was removed under reduced pressure to yield 12.7 g of the title compound of Step A as a white solid melting at 157-158 °C. It was used directly in the next step without further purification.

Step B: Preparation of 4-(2,4-dichlorophenyl)-1,2,4-oxadiazolidine-3,5-dione

A solution of 4.2 g (19 mmol) of the compound of step A in tetrahydrofuran (20 mL) was treated with carbonyldiimidazole (3.2 g, 19 mmol). The mixture was stirred at 25 °C for 16 h. Some precipitated imidazole was filtered off and the filtrate was concentrated under reduced pressure. The residue was partitioned between 1N HCl (20 mL) and ethyl acetate (50 mL). The organic layer was dried over magnesium sulfate and concentrated to an oil which solidified to give 3.8 g of the title compound of Step B as a solid melting at 104-107 °C. It was used directly for the next step without further purification.

Step C: Preparation of 4-fluoro-*N*-propylbenzenamine

A 3L three neck round bottom flask equipped with a nitrogen inlet, a thermometer, an overhead stirrer and a solid addition funnel was charged with 250 mL acetic acid, 50 mL absolute ethanol and 29.5 g (0.27 mol) of 4-fluoroaniline. To this mixture was added acetone (23 mL, 0.31 mol) in one portion followed by the portion-wise addition of sodium acetate trihydrate over 5 min. This vigorously stirred mixture was cooled to 0 °C (dry-ice/acetone) and 4.5 g of sodium borohydride (1.2 mol) was added portion-wise via a solid addition funnel over 50 min while keeping the internal temperature below 10 °C. During this addition, acetic acid (100 mL) and absolute ethanol (50 mL) were added to facilitate stirring. After the addition, the mixture was allowed to warm to room temperature, and then stirred at ambient temperature for 12 h. Sufficient ammonium hydroxide (30% aqueous) was

added to adjust the pH to ~8 while maintaining the internal temperature below 30 °C using an ice/water bath. The mixture was extracted with ether (4 x 400 mL). The combined organic layers were washed with brine, dried over $MgSO_4$, filtered, then concentrated under reduced pressure to give the desired product as a black/brown oil (38 g).

^1H NMR: (300 MHz, $CDCl_3$) δ 6.8-6.9 (t, 2H), 6.5 (m, 2H), 3.5 (m, 1H), 1.2 (d, 6H).

Step D: Preparation of 4-(fluorophenyl)propylcarbamic chloride

A 1L three neck round bottom flask equipped with a nitrogen inlet, a thermometer and two addition funnels was charged with 600 mL of toluene and 36.0 g (0.22 mol) of the compound of Step C. This stirred mixture was cooled to 3 °C, and then 116 mL (0.22 mol) of a 20% solution of phosgene in toluene was added dropwise over 15 min while maintaining the temperature below 10 °C. Ten min after the addition, diisopropyl ethylamine (39 mL, 0.22 mol) was added dropwise over 15 min while maintaining the temperature below 7 °C. The reaction mixture was allowed to warm to room temperature and stirred for 14 hours. The resulting brown solution was flooded with CH_2Cl_2 (700 mL), and then saturated $NaHCO_3$ solution. The organic layer was separated and washed with saturated $NaHCO_3$ solution (3 x 500 mL), dried over $MgSO_4$, and filtered. The solvent was removed under reduced pressure, then *in vacuo*, during which time the resulting oil slowly crystallized. This solid was triturated with hexanes to give 36 g (78%) of a gray solid melting at 50-55 °C.

^1H NMR: (300 MHz, $CDCl_3$) δ 7.1-7.2 (m, 4H), 4.68 (m, 1H), 1.1-1.2 (d, 6H).

Step E: Preparation of 4-(2,4-dichlorophenyl)-*N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

A solution of 0.6 g (2.4 mmol) of the compound of Step B in toluene (25 mL) was treated with 0.42 g (1.9 mmol) of the compound of Step D and 0.35 g (2.9 mmol) of 4-dimethylaminopyridine. The resulting mixture was heated at 80 °C for 1 hour, and subsequently diluted with 1N hydrochloric acid (20 mL) and ethyl acetate (50 mL). The organic layer was separated and washed with saturated brine solution (30 mL). It was then dried over magnesium sulfate and concentrated under reduced pressure. The residue was subjected to column chromatography on silica gel with 85:15 hexanes-ethyl acetate as eluent. Appropriate fractions were combined and concentrated to give 0.32 g of the title compound of Step E, a compound of this invention, as an oil which solidified on standing to give a solid melting at 57-60 °C.

^1H NMR ($CDCl_3$) δ 1.22 (m, 6H), 4.7 (m, 1H), 7.04-7.17 (m, 2H), 7.2-7.3 (m, 3H), 7.39 (d, 1H), 7.58 (s, 1H).

EXAMPLE 2

Step A: Preparation of *N*-(2,6-dimethylphenyl)-*N'*-hydroxylurea

A 500 mL side arm flask equipped with a thermometer and an addition funnel with a nitrogen inlet was charged with 100 mL of toluene and 2.00 g (0.10 mol) of 50% hydroxylamine in water. A solution of 4.41 g of 2,6-dimethylphenyl isocyanate (0.03 mol) dissolved in 50 mL of toluene was added dropwise over 15 min. External cooling was used to maintain the internal reaction temperature below 25 °C. Stirring was continued at room temp for 18 h. The solvent was removed under reduced pressure to give a white solid. The residual solvent was further co-evaporated twice with toluene, then oven dried overnight to give the desired product (5.25 g) as a white solid melting at 192-193 °C.

^{1}H NMR: (300 MHz, DMSO-d_6) δ 8.85 (d, 1H), 8.58 (s, 1H), 8.14 (s, 1H), 7.00-7.08 (m, 3H), 2.15 (s, 6H).

Step B: Preparation of 4-(2,6-dimethylphenyl)-1,2,4-oxadiazolidine-3,5-dione

A 300 mL flask with side arm equipped with a nitrogen inlet and a thermometer was charged with 25 mL of tetrahydrofuran followed by 5.00 g (0.0277 mol) of 2,6-dimethylphenyl hydroxyurea. To this stirred suspension was added portion-wise 4.41 g (0.0277 mol) of carbonyl diimidazole over 5 min. While stirring at room temperature, the suspension turned into a solution before precipitate started to form slowly. After 18 h, the mixture was quenched with 50 mL of 1N HCl which caused the suspension to turn into a solution. It was partitioned between ethyl acetate (250 mL) and 1N HCl (50 mL). The organic layer was separated and washed with brine, then dried over $MgSO_4$ and filtered. The solvent was removed under reduced pressure to give the title compound as a red oil (5.20 g) which slowly crystallized upon standing at room temperature to give a solid melting at 90-100 °C.

^{1}H NMR: (300 MHz, $CDCl_3$) δ 7.30 (t, 1H), 7.20 (d, 2H), 2.24 (s, 6H).

Step C: Preparation of 4-(2,6-dimethylphenyl)-*N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

To a 500 mL two neck round bottom flask equipped with a thermometer and a reflux condenser with nitrogen inlet was charged sequentially 30 mL of toluene, 1.50 g (0.0072 mol) of the compound of Step B, 1.60 g (0.0074 mol) of the compound of Step D in Example 1, and lastly 0.90 g of 4-dimethylaminopyridine (0.072 mol). The reaction became homogeneous upon heating to 85 °C. Heating was continued at 85 °C for 2 h during which time a precipitate was formed. The reaction mixture was then cooled to room temperature, filtered and the solid was washed with toluene (2 x 25 mL). The toluene was removed under reduced pressure to give a tan solid. The product was washed with cool isopropyl alcohol (2 x 10 mL) to give 2.16 g of the title compound, a compound of the invention, as a white solid melting at 134-136 °C.

^{1}H NMR: (300 MHz, DMSO-d_6) δ 7.20-7.47 (m, 7H), 4.52-4.65 (m, 1H), 2.03 (s, 6H).

EXAMPLE 3

Step A: Preparation of 4-(2-propenyl)-1,2,4-oxadiazolidine-3,5-dione

To a 500 mL round-bottom flask were added acetone (300 mL), allyl isocyanate (12.0 g, 0.145 mol), N-hydroxyurethane (6.1 g, 0.058 mol) and triethylamine (11.7 g, 0.116 mol) respectively at room temperature under nitrogen with efficient stirring. The reaction mixture was allowed to stir at room temperature for 6 d. The solvent was removed under reduced pressure. The residue was suspended in 100 mL of 1N HCl, extracted with ethyl acetate (3 x 150 mL). The organic solution was washed with water, brine, dried over $MgSO_4$ and concentrated to a clear yellow oil. The crude product was dried under high vacuum for 4 h to give the title compound as an oil (13.1 g) which was used in the next step without further purification.

^{1}H NMR: (300 MHz, $CDCl_3$) δ: 5.87 (m, 1H), 5.27 (m, 2H), 4.17 (m, 1H), 3.82 (bs, 1H).

Step B: Preparation of *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-4-(2-propenyl)-1,2,4-oxadiazolidine-2-carboxamide

A dry 100 mL round-bottom flask was changed with dry tetrahydrofuran (20 mL), the compound of step A (1.0 g, 7.0 mmol), the compound of Step D in Example 1 (1.5 g, 7.0 mmol), triethylamine (1.0 g, 10.0 mmol) and 4-dimethylaminopyridine (0.2 g, 1.6 mmol) respectively at room temperature under nitrogen atmosphere with stirring. The reaction mixture was heated at reflux for 1.5 h during which time a white solid precipitated out. The reaction mixture was cooled to room temperature and diluted with 150 mL of ethyl acetate. The organic layer was washed with 1N HCl, water, brine, and dried over $MgSO_4$. Upon concentration, a yellow syrup (1.8 g) was obtained. The crude product was purified by flash chromatography on silica gel with ethyl acetate/hexanes 1:9 as eluent to provide 1.22 g of the title compound, a compound of the invention, as a white solid melting at 65-66 °C.

^{1}H NMR: (300 MHz, $CDCl_3$) δ 7.22 (m, 2H), 7.11 (m, 2H), 5.78 (m, 1H), 5.26 (m, 2H), 4.42 (m, 1H), 4.07 (d, 2H), 1.20 (d, 6H).

EXAMPLE 4

Step A: Preparation of phenylhydroxycarbamate

To a stirred solution of $NaHCO_3$ (60.5 g) in water (200 mL) in a 2 L beaker was added portion-wise over 15 min 27.5 g of hydroxylamine hydrochloride. Once the bubbling subsided, dichloromethane (200 mL) was added to the reaction mixture and cooled to 5 °C. Phenyl chloroformate (50 g) was then added at a steady rate to the reaction mixture. The reaction mixture was allowed to warm to room temperature and stirred for 1 h. Ethyl acetate

(100 mL) was employed to bring the reaction mixture to a transparent solution. The organic layer was separated, washed with brine (200 mL) and dried over $MgSO_4$. The organic solvent was removed under reduced pressure to give the title compound (38.20 g) as a white solid melting at 104-107 °C.

Step B: Preparation of *N*-hydroxy-2,2-dimethylhydrazinecarboxamide

To a solution of 37.3 g of the compound of Step A in tetrahydrofuran (200 mL) at room temperature under nitrogen was added 22 mL of 1,1-dimethylhydrazine. The reaction mixture was then heated at reflux overnight. The solvent was removed under reduced pressure to afford an oil which was purified by column chromatography with 9:1 ethyl acetate-methanol as eluent to give a semi-solid. Triturating of the residue with dichloromethane gave the title compound (7.25 g) as a white solid melting at 115-118 °C.

^{1}H NMR (DMSO-d_6) δ 8.5 (brs, 1H), 8.27 (brs, 1H), 7.4 (brs, 1H), 2.4 (s, 6H).

Step C: Preparation of 4-(dimethylamino)-1,2,4-oxadiazolinedine-3,5-dione

The compound of Step B (4.25 g, 29 mmol) was suspended in tetrahydrofuran (25 mL) at 5 °C under nitrogen. To the mixture was added portion-wise 1,1'-carbonyldiimidazole (5.78 g, 29 mmol) while maintaining the reaction temperature under 10 °C. The reaction was partitioned between ethyl acetate (125 mL) and 1N HCl (60 mL). The organic layer was separated. The aqueous layer was further extracted with ethyl acetate (2 x 100 mL). The combined organic layers were dried over $MgSO_4$ and concentrated under reduced pressure to afford the title compound as an oil (2.9 g).

^{1}H NMR ($CDCl_3$) δ 5.1 (br s, 1H), 2.9 (s, 6H).

Step D: Preparation of 4-(dimethylamino)-*N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

The compound of Step D, Example 1 (1.48 g, 6.9 mmol), 4-dimethylaminopyridine (0.84 g, 6.9 mmol), and the compound of Step C (1.00 g, 6.9 mmol) were combined in toluene (25 mL) at room temperature. The reaction mixture was heated to 80 °C for 3 h. Acetonitrile (20 mL) and silica gel (5 g) were added and the solvent was removed under reduced pressure. After column chromatography with 8:2 hexanes-ethyl acetate as eluent, the title compound, a compound of the invention, was isolated as a white solid (1.23 g) melting at 69-71 °C.

^{1}H NMR ($CDCl_3$) δ 7.2 (m, 2H), 7.1 (m, 2H), 4.6 (m, 1H), 2.9 (s, 6H), 1.2 (d, 6H).

EXAMPLE 5

Step A: Preparation of 4-[(2-methylphenyl)methyl]-3-(phenylmethoxy)-1,2,4-oxadiazol-5(4*H*)-one

A 50 mL round bottom flask equipped with a thermometer, a stirrer, and a nitrogen inlet was charged with 3-(phenylmethoxy)-1,2,4-oxadiazol-5(4H)-one (*Synthesis*, (1991),

265 0.5 g, 2.6 mmol), potassium carbonate (0.5 g, 3.6 mmol), tetrabutylammonium bromide (0.022 g, 0.1 mmol), 2-methylbenzyl bromide (0.6 g, 3.2 mmol) and acetonitrile (10 mL). The reaction mixture was stirred at room temperature for 18 h. The reaction mixture was poured into water (25 mL) and extracted with dichloromethane (3 x 20 mL), dried over $MgSO_4$ and concentrated under reduced pressure to provide a solid. The solid was further purified by flash chromatography on silica gel using 9:1 hexane-ethyl acetate to provide 0.3 g (40%) of the title compound as a white solid melting at 77-78 °C.

^{1}H NMR ($CDCl_3$): δ 7.39 (m, 3H), 7.27 (m, 3H), 7.17 (m, 3H), 5.26 (s, 2H), 4.69 (s, 2H), 2.31 (s, 3H).

Step B: Preparation of *N*-(4-chlorophenyl)-*N*-(1-methylethyl)-4-[(2-methylphenyl)methyl]-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

A 50 mL round bottom flask equipped with a stirrer, a thermometer, and a nitrogen inlet was charged with the compound of Step A (0.6 g, 2.05 mmol), (4-chlorophenyl)(1-methylethyl)carbamic chloride (0.5 g, 2.155 mmol), *N*, *N*'-dimethylaminopyridine (0.26 g, 2.13 mmol) and tetrahydrofuran (20 mL). The mixture was heated to reflux for 3 hours, then cooled to room temperature and poured into 1N HCl (50 mL). The mixture was extracted with diethyl ether (3 x 25 mL). The organic layer was dried over $MgSO_4$ and concentrated under reduced pressure to provide a thick oil. The oil was purified by flash chromatography on silica gel using 9:1 hexane-ethyl acetate to provide 0.22 g (28%) of the title compound as a white solid melting at 90-91 °C.

^{1}H NMR ($CDCl_3$): δ 7.5-7.0 (m, 8H), 4.63 (s, 2H), 4.6 (m, 1H), 2.36 (s, 3H), 1.18 (d, 6H).

EXAMPLE 6

Step A: Preparation of 4-methyl-3-(phenylmethoxy)-1,2,4-oxadiazol-5(4*H*)-one

A 50 mL round bottom flask equipped with a thermometer, a stirrer and a nitrogen inlet was charged with 3-(phenylmethoxy)-1,2,4-oxadiazol-5(4H)-one (1 g, 5.2 mmol), iodomethane (0.916 g, 6.5 mmol), 1,8-diazabicyclo[5.4.0]undec-7-ene (1 g, 6.5 mmol) and acetonitrile (10 mL). The mixture was stirred at room temperature for 18 h. The entire reaction mixture was flash chromatographed (silica gel, 8:2 hexane-ethyl acetate) to provide 1 g (37.5%) of the title compound as a white solid melting at 80-83 °C.

^{1}H NMR ($CDCl_3$): δ 7.43 (m, 5H), 5.32 (s, 2H), 3.09 (s, 3H).

Step B: Preparation of *N*-(4-fluorophenyl)-4-methyl-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

A 50 mL round bottom flask equipped with a thermometer, a stirrer and a nitrogen inlet was charged with 4-methyl-3-(phenylmethoxy)-1,2,4-oxadiazol-5(4*H*)-one (0.55 g, 2.66 mmol), (4-fluorophenyl)(1-methylethyl)carbamic chloride (0.581 g, 2.7 mmol),

N, *N'*-dimethylaminopyridine (0.329 g, 2.7 mmol) and acetonitrile (10 mL). The reaction mixture was heated to reflux 2 h, and allowed to cool to room temperature. The entire mixture was flash chromatographed (silica gel, 9:1, then 8:2 hexane-ethyl acetate) to provide 0.6 g (76%) of the title compound as a white solid melting at 135-136 °C.

^{1}H NMR ($CDCl_3$) δ 7.29 (m, 2H), 7.11 (m, 2H), 4.64 (m, 1H), 3.05 (s, 3H), 1.18 (d, 6H).

EXAMPLE 7

Step A: Preparation of *N*-(4-chlorophenyl)-4-methyl-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

A 50 mL round bottom flask, equipped with a thermometer, a stirrer and nitrogen inlet was charged with 3-(phenylmethoxy)-1,2,4-oxadiazol-5(4H)-one (0.5 g, 2.6 mmol), 1,8-diazabicyclo[5.4.0]unded-7-ene (0.5 g, 3.28 mmol), iodomethane (0.5 g, 3.54 mmol) and acetonitrile (5 mL). The mixture was stirred at room temperature for 18 h. To the mixture was added (4-chlorophenyl)(1-methylethyl)carbamic chloride (0.7 g, 3 mmol) and *N*, *N'*-dimethylamino-pyridine (0.367 g, 3 mmol), and the resulting mixture was heated to reflux for 2 h. It was then cooled to room temperature and flash chromatographed (silica gel, 9:1 hexane-ethyl acetate) to provide 150 mg (18 %) of the title compound as a white solid melting at 121-123 °C.

^{1}H NMR ($CDCl_3$): δ 7.36 (m, 2H), 7.2 (m, 2H), 4.6 (m, 1H), 3.05 (s, 3H), 1.21 (d, 6H).

EXAMPLE 8

Step A: Preparation of 4-(2-methylpropyl)-3-(phenylmethoxy)-1,2,4-oxadiazol-5(4*H*)-one

A 50 mL round bottom flask equipped with a thermometer, a stirrer, addition funnel and nitrogen inlet was charged with 3-(phenylmethoxy)-1,2,4-oxadiazol-5(4H)-one (1 g, 5.2 mmol), 2-methyl propanol (0.45 g, 6 mmol), triphenylphosphine (1.57 g, 6 mmol) and tetrahydrofuran (5 mL). The mixture was cooled to 0 °C and a solution of diethyl azodicarboxylate (1.04 g, 6 mmol) in tetrahydrofuran (2 mL) was added dropwise over a period of 10 min. The reaction mixture was allowed to warm to room temperature, and stirred for 18 h. The entire mixture was flash chromatographed (silica gel, 8:2 hexane-ethyl acetate) to provide 1.1 g (84 %) of the title compound as a white solid melting at 53-60 °C.

^{1}H NMR ($CDCl_3$): δ 7.42 (m, 5H), 5.31 (s, 2H), 3.34 (d, 2H), 2.01 (m, 1H), 0.897 (d, 6H).

Step B: Preparation of *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-4-(2-methylpropyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

A 50 mL round bottom flask equipped with a stirrer, a thermometer and a nitrogen inlet was charged with 4-(2-methylpropyl)-3-(phenylmethoxy)-1,2,4-oxadiazol-5(4*H*)-one (0.25 g, 1 mmol), (4-fluorophenyl)(1-methylethyl)carbamic chloride (0.24 g, 1.1 mmol), *N*, *N'*-dimethylaminopyridine (0.14 g, 1.1 mmol) and acetonitrile (10 mL). The mixture was heated to reflux for 2 h and allowed to cool to room temperature. The entire mixture was flashed chromatographed (silica gel, 9:1 hexane-ethyl acetate) to provide 0.18 (53 %) of the title compound as a white solid melting at 80-81 °C.

^{1}H NMR ($CDCl_3$): δ 7.24 (m, 2H), 7.11 (m, 2H), 4.65 (m, 1H), 3.29 (d, 2H), 2.0 (m, 1H), 1.2 (d, 6H), 0.89 (d, 6H).

EXAMPLE 9

Step A: Preparation of *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-4-(phenylmethyl)-1,2,4-oxadiazolidine-2-carboxamide

A 50 mL round bottom flask equipped with a thermometer, a stirrer and a nitrogen inlet was charged with 3-(phenylmethoxy)-1,2,4-oxadiazol-5(4*H*)-one (0.5 g, 2.6 mmol), (4-fluorophenyl)(1-methylethyl)carbamic chloride (0.58 g, 27 mmol), *N*, *N'*-dimethylaminopyridine (0.33 g, 2.7 mmol) and acetonitrile (5 mL). The mixture was heated to reflux for 3 h and allowed to cool to room temperature. The mixture was flash chromatographed (silica gel, 9:1 hexane-ethyl acetate) to provide 0.24 g (25 %) of the title compound as a white solid melting at 95-96 °C.

^{1}H NMR ($CDCl_3$): δ 7.22 (s, 5H), 7.2 (m, 2H), 7.06 (m, 2H), 4.6 (m, 1H), 4.59 (s, 2H), 1.17 (d, 6H).

EXAMPLE 10

Step A: Preparation of *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide and *N*-(4-fluorophenyl)-4-methyl-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

A 50 mL round bottom flask equipped with a thermometer, a stirrer and nitrogen inlet was charged with 3-methoxy-1,2,4-oxadiazol-5(4*H*)-one (1.16 g, 0.01 m), (4-fluorophenyl)(1-methylethyl)carbamic chloride (2.4 g, 0.011 m), *N*, *N'*-dimethylaminopyridine (1.35 g, 0.011 m) and acetonitrile (20 mL). The mixture was heated to reflux for 18 h. The mixture was allowed to cool to room temperature, poured into 1N HCl (20 mL) and extracted with ethyl acetate (3 x 25 mL). The organic phase was dried over $MgSO_4$ and concentrated under reduced pressure to provide a thick oil. The oil was flash chromatographed (silica gel, 7:3 dichloromethane-ethyl acetate) to provide two fractions. Fraction A contained 0.42 g (15%) of *N*-(4-fluorophenyl)-4-methyl-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide as a white solid melting at 135-136 °C. ^{1}H NMR ($CDCl_3$): δ 7.26 (m, 2H), 7.11 (m, 2H), 4.6 (m, 1H), 3.05 (s, 3H),

1.17 (m, 6H). Fraction B contained 1.1 g (40 %) of *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide as a solid melting at 55-60 °C.

^{1}H NMR ($CDCl_3$): δ 7.24 (m, 2H), 7.19 (m, 2H), 4.6 (m, 1H), 1.2 (d, 6H). IR (CH_2Cl_2); 3200, 3300, 1776, 1715 cm^{-1}. MS (M + 1): 281, 257.

Step B: Preparation of *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-4-(2-methylpropyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

A 50 mL round bottom flask equipped with a thermometer, a stirrer, an addition funnel, and a nitrogen inlet was charged with *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide (5.5 g, 0.019 m), 2-methyl-1-propanol (3 g, 0.04 mol), triphenylphosphine (6.3 g, 0.021 mol) and tetrahydrofuran (60 mL). The reaction solution was cooled to 15 °C and diethyl azodicarboxylate (4.2 g, 0.024 mol) in tetrahydrofuran (10 mL) was added dropwise over a period of 10 min. The reaction mixture was stirred at room temperature for 18 h. The solvent was removed under reduced pressure and the residue was flash chromatographed (silica gel, 9:1 hexane-ethyl acetate) to provide the title compound as a white solid (5.6 g, 88%). The solid has a melting range of 80-81 °C, and was identical to the material prepared in Example 8, Step B.

EXAMPLE 11

Step A: Preparation of methyl (chlorocarbonyl)(2,6-dimethylphenyl)carbamate

A mixture of toluene (150 mL), biphenyl (0.2 g) and sodium methoxide in methanol (23.76 g, 0.11 mol, 25% by weight) was heated at reflux, and the methanol-toluene azeotrope was removed. The mixture was allowed to cool to 80 °C, and toluene (80 mL) was added. To the resulting mixture was added in five portions methyl (2,6-dimethylphenyl)carbamate (17.9 g, 0.1 mol). The methanol formed in the reaction was removed as the above azeotrope. When most of the methanol had been removed, ethylene glycol dimethyl ether (8 mL) was added, and the mixture was distilled until the head temperature reached 110 °C. The mixture was allowed to cool to 25 °C, and ethylene glycol dimethyl ether (3 mL) was added. The mixture was then added to phosgene in toluene (22.5 g, 0.56 mol, 25% by weight). When the addition was complete, excess phosgene was removed by distillation. The mixture was allowed to cool to 25 °C, and then washed with sodium bicarbonate solution (40 mL, saturated). The organic layer was dried and the volatiles removed by evaporation to give 17.21 g (64.5%) of the title compound as a solid. An analytical sample was prepared by column chromatography on silica gel using 1:3 ethyl acetate-hexanes as the eluent.

M.P. 84.5–86 °C; IR (Nujol): 1814, 1437, 1252, 1229, 1209, 1182, 1013, 982, 845 cm^{-1}; ^{1}H NMR ($CDCl_3$): δ 7.28-7.12 (m, 3H), 3.82 (s, 3H), 2.23 (s, 6H).

Step B: Preparation of 4-(2,6-dimethylphenyl)-2-methyl-1,2,4-oxadiazolidine-3,5-dione

A portion of the compound from Step A (3.72 g, 15.4 mmol) in dioxane (15 mL) was added to a mixture of aqueous hydroxylamine (2.03 g, 30.7 mmol, 50% by weight) in dioxane (15 mL). When the addition was complete, a solution of potassium hydroxide (2.22 g, 33.6 mmol, 85 %) in water (5 mL) was added dropwise to the mixture so that the temperature did not rise beyond 30 °C. When the addition was complete, the solvent was removed until the volume was reduced to about 5 mL. The mixture was poured into water (100 mL), and the aqueous mixture was extracted with ethyl acetate (2 x 50 mL). The aqueous mixture was acidified with HCl and further extracted with ethyl acetate (2 x 50 mL). The combined organic extracts from the second extraction were dried and evaporated to give the title compound as a solid (2.34 g, 73.7%). The solid has a melting point range of 92-93.5 °C after crystallization from ether/hexanes, and was identical to material prepared in Example 2, Step B.

EXAMPLE 12

Step A: Preparation of *N'*-hydroxy-*N*-(1-methylethyl)-*N*-phenylurea

A solution of 50% aqueous hydroxylamine (16.8 g, 0.25 mol) was added dropwise to a solution of (1-methylethyl)phenylcarbamic chloride (20.0 g, 0.1 mol) in 200 mL of THF in an ice bath so that the reaction temperature was kept below 30 °C. Precipitate began to form halfway through the addition. The resulting slurry was stirred overnight. The mixture was filtered, and the solids collected were first washed with water and then with hexane/ether. After air-drying, 14.56 g of the title compound was obtained. Its structure was confirmed by an analysis of the NMR spectra. The filtrate was stripped down to afford a residue which was washed sequentially with 1N HCl, water and hexane/ether to yield a second crop of the title compound (5.38 g) melting at 165-166 °C. The combined yield was 100%.

^1H NMR (300 MHz, DMSO-d_6): δ 8.10 (br s, 1H), 7.74 (s, 1H), 7.38 (m, 3H), 7.12 (m, 2H), 4.55 (m, 1H), 0.97 (d, 6H)

Step B: Preparation of *N*-(1-methylethyl)-3,5-dioxo-*N*-phenyl-1,2,4-oxadiazolidine-2-carboxamide

A solution of chlorocarbonyl isocyanate (5.0 g, 0.047 mol) was added dropwise to a slurry of the title compound of Step A (9.2 g, 0.047 mol) and triethylamine (5.3 g, 0.052 mol) in 200 mL of THF while maintaining the reaction temperature below 30 °C using an ice bath. After 2 hours, TLC showed the presence of starting material. Another 0.5 g of chlorocarbonyl isocyanate was added, and the reaction mixture was stirred for another hour. At that point, TLC showed still the presence of starting material. The reaction mixture was filtered to remove solids, and the filtrate was stripped to dryness and then extracted with 1N

HCl and ether. Upon evaporation of volatiles, a gummy product was obtained which was taken into methylene chloride and potassium carbonate solution. Solids were collected by a filtration, washed with methylene chloride and air dried. The solids (5.3 g) were found to be the potassium salt of the title compound. The basic aqueous filtrate was acidified with concentrated HCl and extracted with methylene chloride to afford 4 g of the title compound, an intermediate useful for the preparation of the compounds of the present invention, melting at 116-7 °C. From the methylene chloride used to wash the solids, 2.6 g of the title compound of Step A was recovered. This represented a 71.7% conversion. The combined yield was therefore 96% based on the 71.7% conversion.

^{1}H NMR (300 MHz, DMSO-d_6): δ 9.60 (brs, 1H), 7.37 (m, 3H), 7.23 (m, 2H), 4.60 (m, 1H), 1.19 (d, 6H).

EXAMPLE 13

Step A: Preparation of *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

A 1 L three neck round bottom flask equipped with nitrogen inlet, thermometer and water condenser was charged with dioxanes (400 mL), 1,2,4-oxadiazole-3,5-dione (30 g 0.29 moles, prepared according to Srivastava, P. and Robins, R., *J. Med. Chem.* 1981, **24**, 1172-1177), 4-dimethylaminopyridine (36 g, 0.29 mole), and N-isopropyl-4-flourophenylcarbamoyl chloride (63 g, 0.29 moles) at room temperature. The yellow mixture was heated at reflux for 4 hours. When no starting material was detected by thin layer chromatography, heat was tuned off and mixture was cooled to room temperature. The solvent was removed under reduced pressure and the resulting solids were suspended in ethyl acetate. The mixture was washed with 1N HCl, and the aqueous layer was extracted twice with ethyl acetate. The combined organic solutions were washed with brine, dried over anhydrous magnesium sulfate, and concentrated under reduced pressure. The product was crystallized from chlorobutane and hexanes, and filtered to give 47 g (57%) of the title compound as a white solid melting at 94-95 °C.

^{1}H NMR: (300 MHz, $CDCl_3$) δ 7.24 (m, 2H), 7.09 (m, 2H), 4.63 (m, 1H), 1.18 (d, 6H).

Step B: Preparation of *N*-(4-fluorophenyl)-*N*,4-*bis*(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

A solution of the compound of Step A (1.0 g , 3.6 mmol) in 20 mL of triisopropylorthoformate was heated at 145 °C for 2 h and then allowed to stir at ambient temperature overnight. The volatiles were removed under reduced pressure, and the residue recrystallized from methanol to give 0.99 g (86%) of the title compound, a compound of this invention, as a solid melting at 78-80 °C.

^{1}H NMR (300 MHz, $CDCl_3$): δ 7.26(m, 2H), 7.11(m, 2H), 4.62(m, 1H), 4.18(m, 1H), 1.40(d, 6H), 1.20(d, 6H).

EXAMPLE 14

Step A: Preparation of 2,2'-carbonylbis[4-(1-methylethyl)-1,2,4-oxadiazolidine-3,5-dione]

To a solution of 4-(1-methylethyl)-1,2,4-oxadiazolidine-3,5-dione (20 g, 139 mmol) and hexamethylguanidinium chloride (0.25 g, 1.39 mmol) in 150 mL of toluene was added phosgene (6.88 g, 69 mmol, 20% by weight in toluene). The resulting mixture was heated at reflux for 1.5 h with the use of a dry ice/acetone condenser. The volatiles were removed under reduced pressure, and the residue recrystallized from 150 mL of *n*-BuCl to give 14 g (64%) of the title compound as a white solid melting at 150 °C.

^{1}H NMR (300 MHz, $CDCl_3$): δ 1.52 (d, 6H), 4.36 (m, 1H).

Step B: Preparation of *N*,4-bis(1-methylethyl)-3,5-dioxo-*N*-phenyl-1,2,4-oxadiazolidine-2-carboxamide

A solution of the compound of Step A (0.5 g, 1.6 mmol), *N*-phenyl-*N*-(2-methylethyl)amine (0.215 g, 1.6 mmol) and 4- dimethylaminopyridine (0.19 g, 1.6 mmol) in 10 mL of acetonitrile was heated at reflux under a nitrogen atmosphere. The resulting mixture was allowed to cool to ambient temperature and poured into 25 mL of water. It was then extracted with ethylacetate (4 x 25 mL). Condensation gave an oil which was purified by flash chromatography using 1:3 EtOAc-Hexanes as the eluant to give the title compound, a compound of this invention, as a white solid melting at 83-84 °C.

^{1}H NMR (300 MHz, $CDCl_3$): δ 1.20 (d, 6H), 1.38 (d, 6H), 4.16 (m, 1H), 4.63 (m, 1H), 7.26 (m, 2H), 7.39 (m, 3H).

EXAMPLE 15

Step A: *N*-(4-fluorophenyl)-4-(methoxymethyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide

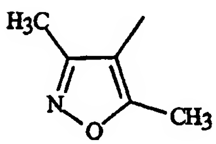
To a solution of 308 uL of bromomethyl methyl ether (1 eq, 90% tech.) in 8 mL dry acetonitrile was added 995 mg of the title compound of Step A in Example 13. To this mixture was then addede 508 uL (1 eq) of 1,8-diazabicyclo[5.4.0]undec-7-ene (DBU). The resulting solution was heated at reflux under a nitrogen atomsphere for 3 h. The reaction mixture was allowed to cool to room temperature and the volatiles removed under reduced pressure. The residue was dissolved in 1 mL of dichloromethane and loaded onto a 70 mL solid phase extraction (SPE) cartridge containing 10 g of silica gel (230-400 mesh). The title compound (260 mg), a compound of this invention, was obtained after elution using a 20% ethyl acetate/hexane solution.

^1H NMR (300 MHz, $CDCl_3$): δ 7.22(m, 2H),7.09 (m, 2H), 4.89 (s, 2H), 4.65 (m, 1H), 3.39 (s, 3H), 1.2 (d, 6H).

By the procedures described herein together with methods known in the art, the following compounds of Tables 1 to 3 can be prepared. The following notations have been used in Tables.

Q-1	Ph	Q-36	$2-SCH_3-Ph$
Q-2	2-Cl-Ph	Q-37	2-Me-6-(*i*-Pr)-Ph
Q-3	3-Cl-Ph	Q-38	2-Cl-4-Me-Ph
Q-4	4-Cl-Ph	Q-39	2-CN-Ph
Q-5	2-Br-Ph	Q-40	4-Cl-2-Me-Ph
Q-6	2-F-Ph	Q-41	2-Cl-6-Me-Ph
Q-76	2,4-di-F-Ph	Q-42	2-Me-5-Cl-Ph
Q-8	2,6-di-F-Ph	Q-43	2-Cl-5-Me-Ph
Q-9	2,3-di-Cl-Ph	Q-44	2-Cl-3-Me-Ph
Q-10	2,4-di-Cl-Ph	Q-45	$2-NO_2-Ph$
Q-11	2,6-di-Cl-Ph	Q-46	1-tetrahydronaphthyl
Q-12	2,6-di-Et-Ph	Q-47	4-(2,3-dihydro-1H-indene)
Q-13	2,6-di-OMe	Q-48	7-(2,3-diH-2,2-di-Me-7-benzofuran)
Q-14	2-Cl-4-F-Ph	Q-49	2-Vinyl-Ph
Q-15	2-Cl-6-F-Ph	Q-50	2-Ph-Ph
Q-16	2-Me-Ph	Q-51	1-(2-Me-tetrahydronaphthyl)
Q-17	3-Me-Ph	Q-52	3-(2-Cl-Pyridine)
Q-18	4-Me-Ph	Q-53	4,6-di-Me-Pyrimidin-5-yl
Q-19	2-Et-Ph	Q-54	4,6-di-OMe-Pyrimidin-5-yl
Q-20	2-Pr-Ph	Q-55	$PhCH_2-$
Q-21	2,5-di-Me-Ph	Q-56	$PhC(CH_3)-$
Q-22	4-OMe-Ph	Q-57	$(2-Cl-Ph)CH_2-$
Q-23	2-Cl-6-Me-Ph	Q-58	$(2,6-di-Cl-Ph)CH_2-$
Q-24	2,6-di-Me-Ph	Q-59	$(2,3-di-Cl-Ph)CH_2-$
Q-25	2,4-di-Me-Ph	Q-60	$(2-Me-Ph)CH_2-$
Q-26	2,5-di-Me-Ph	Q-61	$(2-OCH_3-Ph)CH_2-$
Q-27	2,3-di-Me-Ph	Q-62	$(2,4-di-Cl-Ph)CH_2-$
Q-28	2-Me-6-Et-Ph	Q-63	$(2-CF_3-Ph)CH_2-$
Q-29	$2-CF_3-Ph$	Q-64	$(2-OCF_3-Ph)CH_2-$

Q-30	4-CF_3-Ph	Q-65	(2-CN-Ph)CH_2-
Q-31	2-OCF_2H-Ph	Q-66	(2-Cl-Ph)CH(CH_3)-
Q-32	2-OCF_3-Ph	Q-67	(2-Me-Ph)CH(CH_3)-
Q-33	2,4,6-tri-Me-Ph	Q-68	$PhCH_2CH_2$-
Q-34	4-Cl-2,6-di-Me-Ph	Q-69	(2-Cl-Ph)CH_2CH_2-
Q-35	2-OPh-Ph	Q-70	(2-Me-Ph)CH_2CH_2-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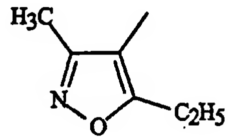
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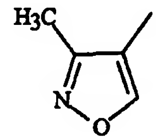
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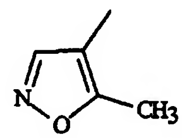
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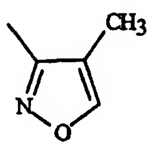
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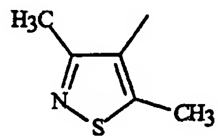
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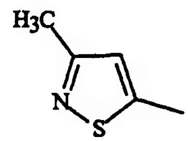
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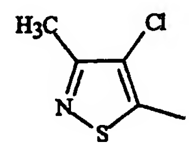
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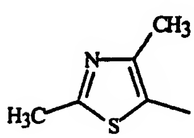
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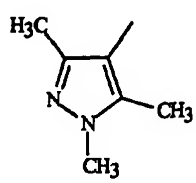
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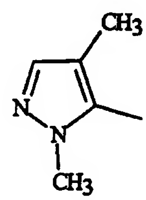
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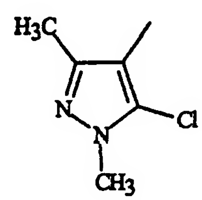
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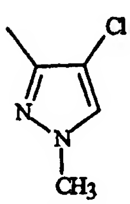
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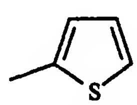
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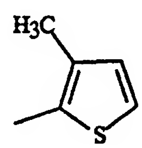
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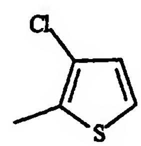
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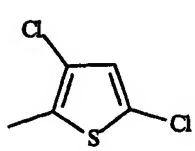
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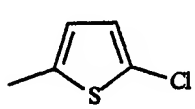
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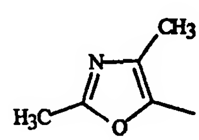
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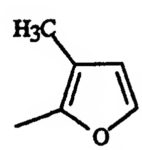
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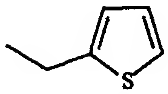

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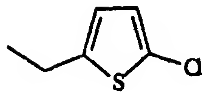

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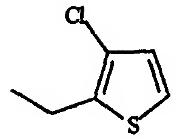

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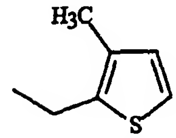
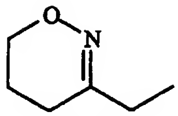


Q-94

Q-95	*n*-Pr	Q-121	*c*-Butyl
Q-96	*n*-Bu	Q-122	EtC(Me)$_2$-
Q-97	i-Bu	Q-123	CF_3CH_2-
Q-98	*n*-hex	Q-124	4-(1-Butenyl)
Q-99	*c*-Pr	Q-125	3-Me-Propargyl
Q-100	Allyl	Q-126	1-(3-Me-1-Propenyl)
Q-101	Propargyl	Q-127	$NCCH_2$-
Q-102	3-(2-Cl-Propenyl)	Q-128	(*i*-C_3H_7)O-
Q-103	Cyclohexyl	Q-129	(Allyl)O-
Q-104	1-cyclohexenyl	Q-130	(Me)$_2$N-
Q-105	2-Me-1-cyclohexenyl	Q-131	1-piperidino
Q-106	$MeOCH_2CH_2$-	Q-132	MeO_2S-
Q-107	$MeOCH_2$-	Q-133	$MeSCH_2CH_2$-
Q-108	3-Cl-Pr	Q-134	$Me_2NS(O)_2$-
Q-109	4-(1,1-di-F-butenyl)	Q-135	O_2NCH_2-
Q-110	3-(1,1-di-Cl-propenyl)	Q-136	MeC(=O)-
Q-111	*i*-Pr	Q-137	(*i*-Pr)OC(=O)-
Q-112	2-OMe-Ph	Q-138	EtOC(=O)-
Q-113	2-Me-6-OMe-Ph	Q-139	$Me_2NC(=O)$-
Q-114	2-Cl-Et	Q-140	$EtOC(=O)CH_2$-
Q-115	3-(2-Me-Propenyl)	Q-141	$(MeO)_2P(=O)CH_2$-
Q-116	*t*-Bu	Q-142	$Me_2NC(=O)CH_2$-
Q-117	$MeC(=NOMe)CH_2$-	Q-143	2-(Tetrahydropyranyl)
Q-118	2-Me-(*c*-Hex)	Q-144	(Oxirane)-CH_2-
Q-119	Et		
Q-120	*c*-Pentyl		



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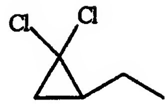

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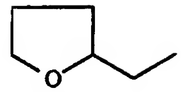

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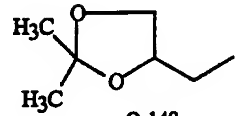

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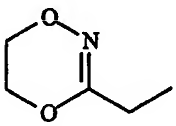

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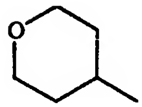

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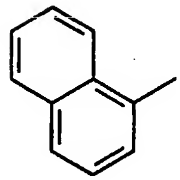

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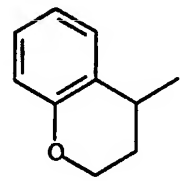

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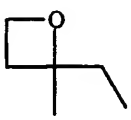

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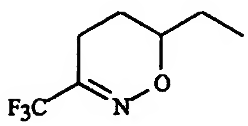

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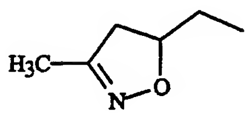

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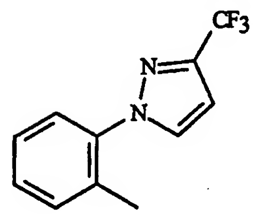
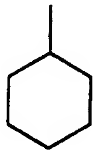


Q-156

Q-157	$Me_2NCH_2CH_2$-	Q-167	2-(SF_5)-Ph
Q-158	Me_2NCH_2-	Q-168	1-(Morpholino)
Q-159	Me_3SiCH_2-	Q-169	EtCH(Me)-
Q-160	Me_2NC(=S)-	Q-170	Me_3CCH_2
Q-161	3-oxetanyl	Q-171	$(Et)_2N$-
Q-162	$NCCH_2CH_2$	Q-172	MeS-
Q-163	MeOC(=O)CH(CH_3)-	Q-173	MeSC(=S)-
Q-164	MeOC(=O)CH(*i*-Pr)-	Q-174	4-(2-Butynyl)
Q-165	MeNH	Q-175	F_3CS-
Q-166	2-(NMe_2)-Ph		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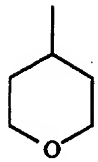
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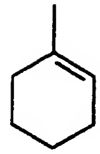
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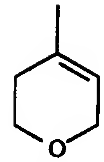
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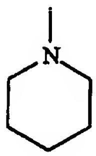
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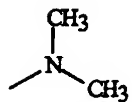

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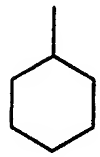
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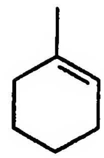
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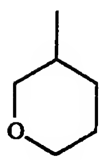
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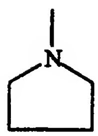
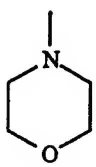

B-10

i-C_3H_7
B-11

C_2H_5

B-12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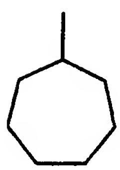
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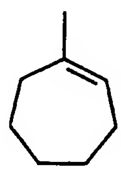
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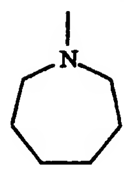
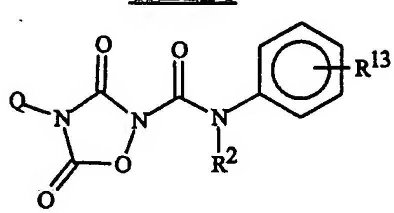

B-16

Allyl
B-17

Propargyl
B-18

TABLE 1



R^2 is i-C_3H_7, R^{13} is 4-F

Q	Q	Q	Q	Q	Q	Q	Q	Q
Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9
Q-10	Q-11	Q-12	Q-13	Q-14	Q-15	Q-16	Q-17	Q-18
Q-19	Q-20	Q-21	Q-22	Q-23	Q-24	Q-25	Q-26	Q-27
Q-28	Q-29	Q-30	Q-31	Q-32	Q-33	Q-34	Q-35	Q-36
Q-37	Q-38	Q-39	Q-40	Q-41	Q-42	Q-43	Q-44	Q-45
Q-46	Q-47	Q-48	Q-49	Q-50	Q-51	Q-52	Q-53	Q-54
Q-55	Q-56	Q-57	Q-58	Q-59	Q-60	Q-61	Q-62	Q-63
Q-64	Q-65	Q-66	Q-67	Q-68	Q-69	Q-70	Q-71	Q-72
Q-73	Q-74	Q-75	Q-76	Q-77	Q-78	Q-79	Q-80	Q-81
Q-82	Q-83	Q-84	Q-85	Q-86	Q-87	Q-88	Q-89	Q-90
Q-91	Q-92	Q-93	Q-94	Q-95	Q-96	Q-97	Q-98	Q-99
Q-100	Q-101	Q-102	Q-103	Q-104	Q-105	Q-106	Q-107	Q-108
Q-109	Q-110	Q-111	Q-112	Q-113	Q-114	Q-115	Q-116	Q-117
Q-118	Q-119	Q-120	Q-121	Q-122	Q-123	Q-124	Q-125	Q-126
Q-127	Q-128	Q-129	Q-130	Q-131	Q-132	Q-133	Q-134	Q-135
Q-136	Q-137	Q-138	Q-139	Q-140	Q-141	Q-142	Q-143	Q-144
Q-145	Q-146	Q-147	Q-148	Q-149	Q-150	Q-151	Q-152	Q-153
Q-154	Q-155	Q-156	Q-157	Q-158	Q-159	Q-160	Q-161	Q-162
Q-163	Q-164	Q-165	Q-166	Q-167	Q-168	Q-169	Q-170	Q-171
Q-172	Q-173	Q-174	Q-175					

R^2 is i-C_3H_7, R^{13} is 2,4-di-F

Q	Q	Q	Q	Q	Q	Q	Q	Q
Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9
Q-10	Q-11	Q-12	Q-13	Q-14	Q-15	Q-16	Q-17	Q-18
Q-19	Q-20	Q-21	Q-22	Q-23	Q-24	Q-25	Q-26	Q-27
Q-28	Q-29	Q-30	Q-31	Q-32	Q-33	Q-34	Q-35	Q-36
Q-37	Q-38	Q-39	Q-40	Q-41	Q-42	Q-43	Q-44	Q-45
Q-46	Q-47	Q-48	Q-49	Q-50	Q-51	Q-52	Q-53	Q-54
Q-55	Q-56	Q-57	Q-58	Q-59	Q-60	Q-61	Q-62	Q-63
Q-64	Q-65	Q-66	Q-67	Q-68	Q-69	Q-70	Q-71	Q-72
Q-73	Q-74	Q-75	Q-76	Q-77	Q-78	Q-79	Q-80	Q-81
Q-82	Q-83	Q-84	Q-85	Q-86	Q-87	Q-88	Q-89	Q-90

Q-91	Q-92	Q-93	Q-94	Q-95	Q-96	Q-97	Q-98	Q-99
Q-100	Q-101	Q-102	Q-103	Q-104	Q-105	Q-106	Q-107	Q-108
Q-109	Q-110	Q-111	Q-112	Q-113	Q-114	Q-115	Q-116	Q-117
Q-118	Q-119	Q-120	Q-121	Q-122	Q-123	Q-124	Q-125	Q-126
Q-127	Q-128	Q-129	Q-130	Q-131	Q-132	Q-133	Q-134	Q-135
Q-136	Q-137	Q-138	Q-139	Q-140	Q-141	Q-142	Q-143	Q-144
Q-145	Q-146	Q-147	Q-148	Q-149	Q-150	Q-151	Q-152	Q-153
Q-154	Q-155	Q-156	Q-157	Q-158	Q-159	Q-160	Q-161	Q-162
Q-163	Q-164	Q-165	Q-166	Q-167	Q-168	Q-169	Q-170	Q-171
Q-172	Q-173	Q-174	Q-175					

R^2 is i-C_3H_7, R^{13} is 4-Cl

Q	Q	Q	Q	Q	Q	Q	Q	Q
Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9
Q-10	Q-11	Q-12	Q-13	Q-14	Q-15	Q-16	Q-17	Q-18
Q-19	Q-20	Q-21	Q-22	Q-23	Q-24	Q-25	Q-26	Q-27
Q-28	Q-29	Q-30	Q-31	Q-32	Q-33	Q-34	Q-35	Q-36
Q-37	Q-38	Q-39	Q-40	Q-41	Q-42	Q-43	Q-44	Q-45
Q-46	Q-47	Q-48	Q-49	Q-50	Q-51	Q-52	Q-53	Q-54
Q-55	Q-56	Q-57	Q-58	Q-59	Q-60	Q-61	Q-62	Q-63
Q-64	Q-65	Q-66	Q-67	Q-68	Q-69	Q-70	Q-71	Q-72
Q-73	Q-74	Q-75	Q-76	Q-77	Q-78	Q-79	Q-80	Q-81
Q-82	Q-83	Q-84	Q-85	Q-86	Q-87	Q-88	Q-89	Q-90
Q-91	Q-92	Q-93	Q-94	Q-95	Q-96	Q-97	Q-98	Q-99
Q-100	Q-101	Q-102	Q-103	Q-104	Q-105	Q-106	Q-107	Q-108
Q-109	Q-110	Q-111	Q-112	Q-113	Q-114	Q-115	Q-116	Q-117
Q-118	Q-119	Q-120	Q-121	Q-122	Q-123	Q-124	Q-125	Q-126
Q-127	Q-128	Q-129	Q-130	Q-131	Q-132	Q-133	Q-134	Q-135
Q-136	Q-137	Q-138	Q-139	Q-140	Q-141	Q-142	Q-143	Q-144
Q-145	Q-146	Q-147	Q-148	Q-149	Q-150	Q-151	Q-152	Q-153
Q-154	Q-155	Q-156	Q-157	Q-158	Q-159	Q-160	Q-161	Q-162
Q-163	Q-164	Q-165	Q-166	Q-167	Q-168	Q-169	Q-170	Q-171
Q-172	Q-173	Q-174	Q-175					

R^2 is i-C_3H_7, R^{13} is H

Q	Q	Q	Q	Q	Q	Q	Q	Q
Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9
Q-10	Q-11	Q-12	Q-13	Q-14	Q-15	Q-16	Q-17	Q-18
Q-19	Q-20	Q-21	Q-22	Q-23	Q-24	Q-25	Q-26	Q-27
Q-28	Q-29	Q-30	Q-31	Q-32	Q-33	Q-34	Q-35	Q-36
Q-37	Q-38	Q-39	Q-40	Q-41	Q-42	Q-43	Q-44	Q-45
Q-46	Q-47	Q-48	Q-49	Q-50	Q-51	Q-52	Q-53	Q-54
Q-55	Q-56	Q-57	Q-58	Q-59	Q-60	Q-61	Q-62	Q-63
Q-64	Q-65	Q-66	Q-67	Q-68	Q-69	Q-70	Q-71	Q-72
Q-73	Q-74	Q-75	Q-76	Q-77	Q-78	Q-79	Q-80	Q-81
Q-82	Q-83	Q-84	Q-85	Q-86	Q-87	Q-88	Q-89	Q-90
Q-91	Q-92	Q-93	Q-94	Q-95	Q-96	Q-97	Q-98	Q-99
Q-100	Q-101	Q-102	Q-103	Q-104	Q-105	Q-106	Q-107	Q-108
Q-109	Q-110	Q-111	Q-112	Q-113	Q-114	Q-115	Q-116	Q-117
Q-118	Q-119	Q-120	Q-121	Q-122	Q-123	Q-124	Q-125	Q-126
Q-127	Q-128	Q-129	Q-130	Q-131	Q-132	Q-133	Q-134	Q-135
Q-136	Q-137	Q-138	Q-139	Q-140	Q-141	Q-142	Q-143	Q-144
Q-145	Q-146	Q-147	Q-148	Q-149	Q-150	Q-151	Q-152	Q-153
Q-154	Q-155	Q-156	Q-157	Q-158	Q-159	Q-160	Q-161	Q-162
Q-163	Q-164	Q-165	Q-166	Q-167	Q-168	Q-169	Q-170	Q-171
Q-172	Q-173	Q-174	Q-175					

Q	R^2	R^{13}	Q	R^2	R^{13}	Q	R^2	R^{13}
Q-2	CH_3	4-F	Q-2	CH_3	2,4-di-F	Q-2	CH_3	4-Cl
Q-16	CH_3	4-F	Q-16	CH_3	2,4-di-F	Q-16	CH_3	4-Cl
Q-24	CH_3	4-F	Q-24	CH_3	2,4-di-F	Q-24	CH_3	4-Cl
Q-29	CH_3	4-F	Q-29	CH_3	2,4-di-F	Q-29	CH_3	4-Cl
Q-57	CH_3	4-F	Q-57	CH_3	2,4-di-F	Q-57	CH_3	4-Cl
Q-71	CH_3	4-F	Q-71	CH_3	2,4-di-F	Q-71	CH_3	4-Cl
Q-100	CH_3	4-F	Q-100	CH_3	2,4-di-F	Q-100	CH_3	4-Cl
Q-119	CH_3	4-F	Q-119	CH_3	2,4-di-F	Q-119	CH_3	4-Cl
Q-120	CH_3	4-F	Q-120	CH_3	2,4-di-F	Q-120	CH_3	4-Cl
Q-126	CH_3	4-F	Q-126	CH_3	2,4-di-F	Q-126	CH_3	4-Cl
Q-130	CH_3	4-F	Q-130	CH_3	2,4-di-F	Q-130	CH_3	4-Cl

Q-144	CH_3	4-F	Q-144	CH_3	2,4-di-F	Q-144	CH_3	4-Cl
Q-162	CH_3	4-F	Q-162	CH_3	2,4-di-F	Q-162	CH_3	4-Cl
Q-169	CH_3	4-F	Q-169	CH_3	2,4-di-F	Q-169	CH_3	4-Cl
Q-2	C_2H_5	4-F	Q-2	C_2H_5	2,4-di-F	Q-2	C_2H_5	4-Cl
Q-16	C_2H_5	4-F	Q-16	C_2H_5	2,4-di-F	Q-16	C_2H_5	4-Cl
Q-24	C_2H_5	4-F	Q-24	C_2H_5	2,4-di-F	Q-24	C_2H_5	4-Cl
Q-29	C_2H_5	4-F	Q-29	C_2H_5	2,4-di-F	Q-29	C_2H_5	4-Cl
Q-57	C_2H_5	4-F	Q-57	C_2H_5	2,4-di-F	Q-57	C_2H_5	4-Cl
Q-71	C_2H_5	4-F	Q-71	C_2H_5	2,4-di-F	Q-71	C_2H_5	4-Cl
Q-100	C_2H_5	4-F	Q-100	C_2H_5	2,4-di-F	Q-100	C_2H_5	4-Cl
Q-119	C_2H_5	4-F	Q-119	C_2H_5	2,4-di-F	Q-119	C_2H_5	4-Cl
Q-120	C_2H_5	4-F	Q-120	C_2H_5	2,4-di-F	Q-120	C_2H_5	4-Cl
Q-126	C_2H_5	4-F	Q-126	C_2H_5	2,4-di-F	Q-126	C_2H_5	4-Cl
Q-130	C_2H_5	4-F	Q-130	C_2H_5	2,4-di-F	Q-130	C_2H_5	4-Cl
Q-144	C_2H_5	4-F	Q-144	C_2H_5	2,4-di-F	Q-144	C_2H_5	4-Cl
Q-162	C_2H_5	4-F	Q-162	C_2H_5	2,4-di-F	Q-162	C_2H_5	4-Cl
Q-169	C_2H_5	4-F	Q-169	C_2H_5	2,4-di-F	Q-169	C_2H_5	4-Cl
Q-2	*i*-C_4H_9	4-F	Q-2	*i*-C_4H_9	2,4-di-F	Q-2	*i*-C_4H_9	4-Cl
Q-16	*i*-C_4H_9	4-F	Q-16	*i*-C_4H_9	2,4-di-F	Q-16	*i*-C_4H_9	4-Cl
Q-24	*i*-C_4H_9	4-F	Q-24	*i*-C_4H_9	2,4-di-F	Q-24	*i*-C_4H_9	4-Cl
Q-29	*i*-C_4H_9	4-F	Q-29	*i*-C_4H_9	2,4-di-F	Q-29	*i*-C_4H_9	4-Cl
Q-57	*i*-C_4H_9	4-F	Q-57	*i*-C_4H_9	2,4-di-F	Q-57	*i*-C_4H_9	4-Cl
Q-71	*i*-C_4H_9	4-F	Q-71	*i*-C_4H_9	2,4-di-F	Q-71	*i*-C_4H_9	4-Cl
Q-100	*i*-C_4H_9	4-F	Q-100	*i*-C_4H_9	2,4-di-F	Q-100	*i*-C_4H_9	4-Cl
Q-119	*i*-C_4H_9	4-F	Q-119	*i*-C_4H_9	2,4-di-F	Q-119	*i*-C_4H_9	4-Cl
Q-120	*i*-C_4H_9	4-F	Q-120	*i*-C_4H_9	2,4-di-F	Q-120	*i*-C_4H_9	4-Cl
Q-126	*i*-C_4H_9	4-F	Q-126	*i*-C_4H_9	2,4-di-F	Q-126	*i*-C_4H_9	4-Cl
Q-130	*i*-C_4H_9	4-F	Q-130	*i*-C_4H_9	2,4-di-F	Q-130	*i*-C_4H_9	4-Cl
Q-144	*i*-C_4H_9	4-F	Q-144	*i*-C_4H_9	2,4-di-F	Q-144	*i*-C_4H_9	4-Cl
Q-162	*i*-C_4H_9	4-F	Q-162	*i*-C_4H_9	2,4-di-F	Q-162	*i*-C_4H_9	4-Cl
Q-169	*i*-C_4H_9	4-F	Q-169	*i*-C_4H_9	2,4-di-F	Q-169	*i*-C_4H_9	4-Cl
Q-2	*n*-C_3H_7	4-F	Q-2	*n*-C_3H_7	2,4-di-F	Q-2	*n*-C_3H_7	4-Cl
Q-16	*n*-C_3H_7	4-F	Q-16	*n*-C_3H_7	2,4-di-F	Q-16	*n*-C_3H_7	4-Cl
Q-24	*n*-C_3H_7	4-F	Q-24	*n*-C_3H_7	2,4-di-F	Q-24	*n*-C_3H_7	4-Cl

Q-29	n-C_3H_7	4-F	Q-29	n-C_3H_7	2,4-di-F	Q-29	n-C_3H_7	4-Cl
Q-57	n-C_3H_7	4-F	Q-57	n-C_3H_7	2,4-di-F	Q-57	n-C_3H_7	4-Cl
Q-71	n-C_3H_7	4-F	Q-71	n-C_3H_7	2,4-di-F	Q-71	n-C_3H_7	4-Cl
Q-100	n-C_3H_7	4-F	Q-100	n-C_3H_7	2,4-di-F	Q-100	n-C_3H_7	4-Cl
Q-119	n-C_3H_7	4-F	Q-119	n-C_3H_7	4-F	Q-119	n-C_3H_7	4-F
Q-120	n-C_3H_7	4-F	Q-120	n-C_3H_7	4-F	Q-120	n-C_3H_7	4-F
Q-126	n-C_3H_7	4-F	Q-126	n-C_3H_7	4-F	Q-126	n-C_3H_7	4-F
Q-130	n-C_3H_7	4-F	Q-130	n-C_3H_7	4-F	Q-130	n-C_3H_7	4-F
Q-144	n-C_3H_7	4-F	Q-144	n-C_3H_7	4-F	Q-144	n-C_3H_7	4-F
Q-162	n-C_3H_7	4-F	Q-162	n-C_3H_7	4-F	Q-162	n-C_3H_7	4-F
Q-169	n-C_3H_7	4-F	Q-169	n-C_3H_7	4-F	Q-169	n-C_3H_7	4-F
Q-2	Cyclopropyl	4-F	Q-2	Cyclopropyl	2,4-di-F	Q-2	Cyclopropyl	4-Cl
Q-16	Cyclopropyl	4-F	Q-16	Cyclopropyl	2,4-di-F	Q-16	Cyclopropyl	4-Cl
Q-24	Cyclopropyl	4-F	Q-24	Cyclopropyl	2,4-di-F	Q-24	Cyclopropyl	4-Cl
Q-29	Cyclopropyl	4-F	Q-29	Cyclopropyl	2,4-di-F	Q-29	Cyclopropyl	4-Cl
Q-57	Cyclopropyl	4-F	Q-57	Cyclopropyl	2,4-di-F	Q-57	Cyclopropyl	4-Cl
Q-71	Cyclopropyl	4-F	Q-71	Cyclopropyl	2,4-di-F	Q-71	Cyclopropyl	4-Cl
Q-100	Cyclopropyl	4-F	Q-100	Cyclopropyl	2,4-di-F	Q-100	Cyclopropyl	4-Cl
Q-119	Cyclopropyl	4-F	Q-119	Cyclopropyl	2,4-di-F	Q-119	Cyclopropyl	4-Cl
Q-120	Cyclopropyl	4-F	Q-120	Cyclopropyl	2,4-di-F	Q-120	Cyclopropyl	4-Cl
Q-126	Cyclopropyl	4-F	Q-126	Cyclopropyl	2,4-di-F	Q-126	Cyclopropyl	4-Cl
Q-130	Cyclopropyl	4-F	Q-130	Cyclopropyl	2,4-di-F	Q-130	Cyclopropyl	4-Cl
Q-144	Cyclopropyl	4-F	Q-144	Cyclopropyl	2,4-di-F	Q-144	Cyclopropyl	4-Cl
Q-162	Cyclopropyl	4-F	Q-162	Cyclopropyl	2,4-di-F	Q-162	Cyclopropyl	4-Cl
Q-169	Cyclopropyl	4-F	Q-169	Cyclopropyl	2,4-di-F	Q-169	Cyclopropyl	4-Cl

Q	R^2	R^{13}	Q	R^2	R^{13}	Q	R^2	R^{13}
Q-2	i-C_3H_7	4-OCF_3	Q-2	i-C_3H_7	4-$COOCH_3$	Q-2	i-C_3H_7	3,5-di-F
Q-16	i-C_3H_7	4-OCF_3	Q-16	i-C_3H_7	4-$COOCH_3$	Q-16	i-C_3H_7	3,5-di-F
Q-24	i-C_3H_7	4-OCF_3	Q-24	i-C_3H_7	4-$COOCH_3$	Q-24	i-C_3H_7	3,5-di-F
Q-29	i-C_3H_7	4-OCF_3	Q-29	i-C_3H_7	4-$COOCH_3$	Q-29	i-C_3H_7	3,5-di-F
Q-57	i-C_3H_7	4-OCF_3	Q-57	i-C_3H_7	4-$COOCH_3$	Q-57	i-C_3H_7	3,5-di-F
Q-71	i-C_3H_7	4-OCF_3	Q-71	i-C_3H_7	4-$COOCH_3$	Q-71	i-C_3H_7	3,5-di-F
Q-100	i-C_3H_7	4-OCF_3	Q-100	i-C_3H_7	4-$COOCH_3$	Q-100	i-C_3H_7	3,5-di-F

Q-119	i-C_3H_7	4-OCF_3	Q-119	i-C_3H_7	4-$COOCH_3$	Q-119	i-C_3H_7	3,5-di-F
Q-120	i-C_3H_7	4-OCF_3	Q-120	i-C_3H_7	4-$COOCH_3$	Q-120	i-C_3H_7	3,5-di-F
Q-126	i-C_3H_7	4-OCF_3	Q-126	i-C_3H_7	4-$COOCH_3$	Q-126	i-C_3H_7	3,5-di-F
Q-130	i-C_3H_7	4-OCF_3	Q-130	i-C_3H_7	4-$COOCH_3$	Q-130	i-C_3H_7	3,5-di-F
Q-144	i-C_3H_7	4-OCF_3	Q-144	i-C_3H_7	4-$COOCH_3$	Q-144	i-C_3H_7	3,5-di-F
Q-162	i-C_3H_7	4-OCF_3	Q-162	i-C_3H_7	4-$COOCH_3$	Q-162	i-C_3H_7	3,5-di-F
Q-169	i-C_3H_7	4-OCF_3	Q-169	i-C_3H_7	4-$COOCH_3$	Q-169	i-C_3H_7	3,5-di-F
Q-2	i-C_3H_7	4-CF_3	Q-2	i-C_3H_7	4-CH_3	Q-2	i-C_3H_7	2,4,6-tri-F
Q-16	i-C_3H_7	4-CF_3	Q-16	i-C_3H_7	4-CH_3	Q-16	i-C_3H_7	2,4,6-tri-F
Q-24	i-C_3H_7	4-CF_3	Q-24	i-C_3H_7	4-CH_3	Q-24	i-C_3H_7	2,4,6-tri-F
Q-29	i-C_3H_7	4-CF_3	Q-29	i-C_3H_7	4-CH_3	Q-29	i-C_3H_7	2,4,6-tri-F
Q-57	i-C_3H_7	4-CF_3	Q-57	i-C_3H_7	4-CH_3	Q-57	i-C_3H_7	2,4,6-tri-F
Q-71	i-C_3H_7	4-CF_3	Q-71	i-C_3H_7	4-CH_3	Q-71	i-C_3H_7	2,4,6-tri-F
Q-100	i-C_3H_7	4-CF_3	Q-100	i-C_3H_7	4-CH_3	Q-100	i-C_3H_7	2,4,6-tri-F
Q-119	i-C_3H_7	4-CF_3	Q-119	i-C_3H_7	4-CH_3	Q-119	i-C_3H_7	2,4,6-tri-F
Q-120	i-C_3H_7	4-CF_3	Q-120	i-C_3H_7	4-CH_3	Q-120	i-C_3H_7	2,4,6-tri-F
Q-126	i-C_3H_7	4-CF_3	Q-126	i-C_3H_7	4-CH_3	Q-126	i-C_3H_7	2,4,6-tri-F
Q-130	i-C_3H_7	4-CF_3	Q-130	i-C_3H_7	4-CH_3	Q-130	i-C_3H_7	2,4,6-tri-F
Q-144	i-C_3H_7	4-CF_3	Q-144	i-C_3H_7	4-CH_3	Q-144	i-C_3H_7	2,4,6-tri-F
Q-162	i-C_3H_7	4-CF_3	Q-162	i-C_3H_7	4-CH_3	Q-162	i-C_3H_7	2,4,6-tri-F
Q-169	i-C_3H_7	4-CF_3	Q-169	i-C_3H_7	4-CH_3	Q-169	i-C_3H_7	2,4,6-tri-F
Q-2	i-C_3H_7	4-OCH_3	Q-2	i-C_3H_7	2,4-di-Cl	Q-2	i-C_3H_7	2,5-di-F
Q-16	i-C_3H_7	4-OCH_3	Q-16	i-C_3H_7	2,4-di-Cl	Q-16	i-C_3H_7	2,5-di-F
Q-24	i-C_3H_7	4-OCH_3	Q-24	i-C_3H_7	2,4-di-Cl	Q-24	i-C_3H_7	2,5-di-F
Q-29	i-C_3H_7	4-OCH_3	Q-29	i-C_4H_9	2,4-di-Cl	Q-29	i-C_3H_7	2,5-di-F
Q-57	i-C_3H_7	4-OCH_3	Q-57	i-C_3H_7	2,4-di-Cl	Q-57	i-C_3H_7	2,5-di-F
Q-71	i-C_3H_7	4-OCH_3	Q-71	i-C_3H_7	2,4-di-Cl	Q-71	i-C_3H_7	2,5-di-F
Q-100	i-C_3H_7	4-OCH_3	Q-100	i-C_3H_7	2,4-di-Cl	Q-100	i-C_3H_7	2,5-di-F
Q-119	i-C_3H_7	4-OCH_3	Q-119	i-C_3H_7	2,4-di-Cl	Q-119	i-C_3H_7	2,5-di-F
Q-120	i-C_3H_7	4-OCH_3	Q-120	i-C_3H_7	2,4-di-Cl	Q-120	i-C_3H_7	2,5-di-F
Q-126	i-C_3H_7	4-OCH_3	Q-126	i-C_3H_7	2,4-di-Cl	Q-126	i-C_3H_7	2,5-di-F
Q-130	i-C_3H_7	4-OCH_3	Q-130	i-C_4H_9	2,4-di-Cl	Q-130	i-C_3H_7	2,5-di-F
Q-144	i-C_3H_7	4-OCH_3	Q-144	i-C_3H_7	2,4-di-Cl	Q-144	i-C_3H_7	2,5-di-F
Q-162	i-C_3H_7	4-OCH_3	Q-162	i-C_3H_7	2,4-di-Cl	Q-162	i-C_3H_7	2,5-di-F

Q-169	i-C_3H_7	4-OCH_3	Q-169	i-C_3H_7	2,4-di-Cl	Q-169	i-C_3H_7	2,5-di-F
Q-2	i-C_3H_7	4-CN	Q-2	i-C_3H_7	2-F, 4-Cl	Q-2	i-C_3H_7	4-OCF_2H
Q-16	i-C_3H_7	4-CN	Q-16	i-C_3H_7	2-F, 4-Cl	Q-16	i-C_3H_7	4-OCF_2H
Q-24	i-C_3H_7	4-CN	Q-24	i-C_3H_7	2-F, 4-Cl	Q-24	i-C_3H_7	4-OCF_2H
Q-29	i-C_3H_7	4-CN	Q-29	i-C_3H_7	2-F, 4-Cl	Q-29	i-C_3H_7	4-OCF_2H
Q-57	i-C_3H_7	4-CN	Q-57	i-C_3H_7	2-F, 4-Cl	Q-57	i-C_3H_7	4-OCF_2H
Q-71	i-C_3H_7	4-CN	Q-71	i-C_3H_7	2-F, 4-Cl	Q-71	i-C_3H_7	4-OCF_2H
Q-100	i-C_3H_7	4-CN	Q-100	i-C_3H_7	2-F, 4-Cl	Q-100	i-C_3H_7	4-OCF_2H
Q-119	i-C_3H_7	4-CN	Q-119	i-C_3H_7	2-F, 4-Cl	Q-119	i-C_3H_7	4-OCF_2H
Q-120	i-C_3H_7	4-CN	Q-120	i-C_3H_7	2-F, 4-Cl	Q-120	i-C_3H_7	4-OCF_2H
Q-126	i-C_3H_7	4-CN	Q-126	i-C_3H_7	2-F, 4-Cl	Q-126	i-C_3H_7	4-OCF_2H
Q-130	i-C_3H_7	4-CN	Q-130	i-C_3H_7	2-F, 4-Cl	Q-130	i-C_3H_7	4-OCF_2H
Q-144	i-C_3H_7	4-CN	Q-144	i-C_3H_7	2-F, 4-Cl	Q-144	i-C_3H_7	4-OCF_2H
Q-162	i-C_3H_7	4-CN	Q-162	i-C_3H_7	2-F, 4-Cl	Q-162	i-C_3H_7	4-OCF_2H
Q-169	i-C_3H_7	4-CN	Q-169	i-C_3H_7	2-F, 4-Cl	Q-169	i-C_3H_7	4-OCF_2H
Q-2	i-C_3H_7	4-NO_2	Q-2	i-C_3H_7	3,4-di-F	Q-2	i-C_3H_7	4-SCH_3
Q-16	i-C_3H_7	4-NO_2	Q-16	i-C_3H_7	3,4-di-F	Q-16	i-C_3H_7	4-SCH_3
Q-24	i-C_3H_7	4-NO_2	Q-24	i-C_3H_7	3,4-di-F	Q-24	i-C_3H_7	4-SCH_3
Q-29	i-C_3H_7	4-NO_2	Q-29	i-C_3H_7	3,4-di-F	Q-29	i-C_3H_7	4-SCH_3
Q-57	i-C_3H_7	4-NO_2	Q-57	i-C_3H_7	3,4-di-F	Q-57	i-C_3H_7	4-SCH_3
Q-71	i-C_3H_7	4-NO_2	Q-71	i-C_3H_7	3,4-di-F	Q-71	i-C_3H_7	4-SCH_3
Q-100	i-C_3H_7	4-NO_2	Q-100	i-C_3H_7	3,4-di-F	Q-100	i-C_3H_7	4-SCH_3
Q-119	i-C_3H_7	4-NO_2	Q-119	i-C_3H_7	3,4-di-F	Q-119	i-C_3H_7	4-SCH_3
Q-120	i-C_3H_7	4-NO_2	Q-120	i-C_3H_7	3,4-di-F	Q-120	i-C_3H_7	4-SCH_3
Q-126	i-C_3H_7	4-NO_2	Q-126	i-C_3H_7	3,4-di-F	Q-126	i-C_3H_7	4-SCH_3
Q-130	i-C_3H_7	4-NO_2	Q-130	i-C_3H_7	3,4-di-F	Q-130	i-C_3H_7	4-SCH_3
Q-144	i-C_3H_7	4-NO_2	Q-144	i-C_3H_7	3,4-di-F	Q-144	i-C_3H_7	4-SCH_3
Q-162	i-C_3H_7	4-NO_2	Q-162	i-C_3H_7	3,4-di-F	Q-162	i-C_3H_7	4-SCH_3
Q-169	i-C_3H_7	4-NO_2	Q-169	i-C_3H_7	3,4-di-F	Q-169	i-C_3H_7	4-SCH_3

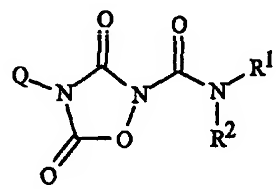
Q	R^2	R^{13}	Q	R^2	R^{13}	Q	R^2	R^{13}
Q-2	Allyl	4-F	Q-2	Allyl	2,4-di-F	Q-2	Allyl	4-Cl
Q-16	Allyl	4-F	Q-16	Allyl	2,4-di-F	Q-16	Allyl	4-Cl

Q	R^2	R^{13}	Q	R^2	R^{13}	Q	R^2	R^{13}
Q-24	Allyl	4-F	Q-24	Allyl	2,4-di-F	Q-24	Allyl	4-Cl
Q-29	Allyl	4-F	Q-29	Allyl	2,4-di-F	Q-29	Allyl	4-Cl
Q-57	Allyl	4-F	Q-57	Allyl	2,4-di-F	Q-57	Allyl	4-Cl
Q-71	Allyl	4-F	Q-71	Allyl	2,4-di-F	Q-71	Allyl	4-Cl
Q-100	Allyl	4-F	Q-100	Allyl	2,4-di-F	Q-100	Allyl	4-Cl
Q-119	Allyl	4-F	Q-119	Allyl	2,4-di-F	Q-119	Allyl	4-Cl
Q-120	Allyl	4-F	Q-120	Allyl	2,4-di-F	Q-120	Allyl	4-Cl
Q-126	Allyl	4-F	Q-126	Allyl	2,4-di-F	Q-126	Allyl	4-Cl
Q-130	Allyl	4-F	Q-130	Allyl	2,4-di-F	Q-130	Allyl	4-Cl
Q-144	Allyl	4-F	Q-144	Allyl	2,4-di-F	Q-144	Allyl	4-Cl
Q-162	Allyl	4-F	Q-162	Allyl	2,4-di-F	Q-162	Allyl	4-Cl
Q-169	Allyl	4-F	Q-169	Allyl	2,4-di-F	Q-169	Allyl	4-Cl
Q-2	OCH_3	4-F	Q-2	OCH_3	2,4-di-F	Q-2	OCH_3	4-Cl
Q-16	OCH_3	4-F	Q-16	OCH_3	2,4-di-F	Q-16	OCH_3	4-Cl
Q-24	OCH_3	4-F	Q-24	OCH_3	2,4-di-F	Q-24	OCH_3	4-Cl
Q-29	OCH_3	4-F	Q-29	OCH_3	2,4-di-F	Q-29	OCH_3	4-Cl
Q-57	OCH_3	4-F	Q-57	OCH_3	2,4-di-F	Q-57	OCH_3	4-Cl
Q-71	OCH_3	4-F	Q-71	OCH_3	2,4-di-F	Q-71	OCH_3	4-Cl
Q-100	OCH_3	4-F	Q-100	OCH_3	2,4-di-F	Q-100	OCH_3	4-Cl
Q-119	OCH_3	4-F	Q-119	OCH_3	2,4-di-F	Q-119	OCH_3	4-Cl
Q-120	OCH_3	4-F	Q-120	OCH_3	2,4-di-F	Q-120	OCH_3	4-Cl
Q-126	OCH_3	4-F	Q-126	OCH_3	2,4-di-F	Q-126	OCH_3	4-Cl
Q-130	OCH_3	4-F	Q-130	OCH_3	2,4-di-F	Q-130	OCH_3	4-Cl
Q-144	OCH_3	4-F	Q-144	OCH_3	2,4-di-F	Q-144	OCH_3	4-Cl
Q-162	OCH_3	4-F	Q-162	OCH_3	2,4-di-F	Q-162	OCH_3	4-Cl
Q-169	OCH_3	4-F	Q-169	OCH_3	2,4-di-F	Q-169	OCH_3	4-Cl
Q-2	$N(CH_3)_2$	4-F	Q-2	$N(CH_3)_2$	2,4-di-F	Q-2	$N(CH_3)_2$	4-Cl
Q-16	$N(CH_3)_2$	4-F	Q-16	$N(CH_3)_2$	2,4-di-F	Q-16	$N(CH_3)_2$	4-Cl
Q-24	$N(CH_3)_2$	4-F	Q-24	$N(CH_3)_2$	2,4-di-F	Q-24	$N(CH_3)_2$	4-Cl
Q-29	$N(CH_3)_2$	4-F	Q-29	$N(CH_3)_2$	2,4-di-F	Q-29	$N(CH_3)_2$	4-Cl
Q-57	$N(CH_3)_2$	4-F	Q-57	$N(CH_3)_2$	2,4-di-F	Q-57	$N(CH_3)_2$	4-Cl
Q-71	$N(CH_3)_2$	4-F	Q-71	$N(CH_3)_2$	2,4-di-F	Q-71	$N(CH_3)_2$	4-Cl
Q-100	$N(CH_3)_2$	4-F	Q-100	$N(CH_3)_2$	2,4-di-F	Q-100	$N(CH_3)_2$	4-Cl

Q	R^2	R^{13}	Q	R^2	R^{13}	Q	R^2	R^{13}
Q-119	$N(CH_3)_2$	4-F	Q-119	$N(CH_3)_2$	2,4-di-F	Q-119	$N(CH_3)_2$	4-Cl
Q-120	$N(CH_3)_2$	4-F	Q-120	$N(CH_3)_2$	2,4-di-F	Q-120	$N(CH_3)_2$	4-Cl
Q-126	$N(CH_3)_2$	4-F	Q-126	$N(CH_3)_2$	2,4-di-F	Q-126	$N(CH_3)_2$	4-Cl
Q-130	$N(CH_3)_2$	4-F	Q-130	$N(CH_3)_2$	2,4-di-F	Q-130	$N(CH_3)_2$	4-Cl
Q-144	$N(CH_3)_2$	4-F	Q-144	$N(CH_3)_2$	2,4-di-F	Q-144	$N(CH_3)_2$	4-Cl
Q-162	$N(CH_3)_2$	4-F	Q-162	$N(CH_3)_2$	2,4-di-F	Q-162	$N(CH_3)_2$	4-Cl
Q-169	$N(CH_3)_2$	4-F	Q-169	$N(CH_3)_2$	2,4-di-F	Q-169	$N(CH_3)_2$	4-Cl
Q-2	CH_2OCH_3	4-F	Q-2	CH_2OCH_3	2,4-di-F	Q-2	CH_2OCH_3	4-Cl
Q-16	CH_2OCH_3	4-F	Q-16	CH_2OCH_3	2,4-di-F	Q-16	CH_2OCH_3	4-Cl
Q-24	CH_2OCH_3	4-F	Q-24	CH_2OCH_3	2,4-di-F	Q-24	CH_2OCH_3	4-Cl
Q-29	CH_2OCH_3	4-F	Q-29	CH_2OCH_3	2,4-di-F	Q-29	CH_2OCH_3	4-Cl
Q-57	CH_2OCH_3	4-F	Q-57	CH_2OCH_3	2,4-di-F	Q-57	CH_2OCH_3	4-Cl
Q-71	CH_2OCH_3	4-F	Q-71	CH_2OCH_3	2,4-di-F	Q-71	CH_2OCH_3	4-Cl
Q-100	CH_2OCH_3	4-F	Q-100	CH_2OCH_3	2,4-di-F	Q-100	CH_2OCH_3	4-Cl
Q-119	CH_2OCH_3	4-F	Q-119	CH_2OCH_3	2,4-di-F	Q-119	CH_2OCH_3	4-Cl
Q-120	CH_2OCH_3	4-F	Q-120	CH_2OCH_3	2,4-di-F	Q-120	CH_2OCH_3	4-Cl
Q-126	CH_2OCH_3	4-F	Q-126	CH_2OCH_3	2,4-di-F	Q-126	CH_2OCH_3	4-Cl
Q-130	CH_2OCH_3	4-F	Q-130	CH_2OCH_3	2,4-di-F	Q-130	CH_2OCH_3	4-Cl
Q-144	CH_2OCH_3	4-F	Q-144	CH_2OCH_3	2,4-di-F	Q-144	CH_2OCH_3	4-Cl
Q-162	CH_2OCH_3	4-F	Q-162	CH_2OCH_3	2,4-di-F	Q-162	CH_2OCH_3	4-Cl
Q-169	CH_2OCH_3	4-F	Q-169	CH_2OCH_3	2,4-di-F	Q-169	CH_2OCH_3	4-Cl
Q-2	CH_2CF_3	4-F	Q-2	CH_2CF_3	2,4-di-F	Q-2	CH_2CF_3	4-Cl
Q-16	CH_2CF_3	4-F	Q-16	CH_2CF_3	2,4-di-F	Q-16	CH_2CF_3	4-Cl
Q-24	CH_2CF_3	4-F	Q-24	CH_2CF_3	2,4-di-F	Q-24	CH_2CF_3	4-Cl
Q-29	CH_2CF_3	4-F	Q-29	CH_2CF_3	2,4-di-F	Q-29	CH_2CF_3	4-Cl
Q-57	CH_2CF_3	4-F	Q-57	CH_2CF_3	2,4-di-F	Q-57	CH_2CF_3	4-Cl
Q-71	CH_2CF_3	4-F	Q-71	CH_2CF_3	2,4-di-F	Q-71	CH_2CF_3	4-Cl
Q-100	CH_2CF_3	4-F	Q-100	CH_2CF_3	2,4-di-F	Q-100	CH_2CF_3	4-Cl
Q-119	CH_2CF_3	4-F	Q-119	CH_2CF_3	2,4-di-F	Q-119	CH_2CF_3	4-Cl
Q-120	CH_2CF_3	4-F	Q-120	CH_2CF_3	2,4-di-F	Q-120	CH_2CF_3	4-Cl
Q-126	CH_2CF_3	4-F	Q-126	CH_2CF_3	2,4-di-F	Q-126	CH_2CF_3	4-Cl
Q-130	CH_2CF_3	4-F	Q-130	CH_2CF_3	2,4-di-F	Q-130	CH_2CF_3	4-Cl
Q-144	CH_2CF_3	4-F	Q-144	CH_2CF_3	2,4-di-F	Q-144	CH_2CF_3	4-Cl

Q	R^2	R^{13}	Q	R^2	R^{13}	Q	R^2	R^{13}
Q-162	CH_2CF_3	4-F	Q-162	CH_2CF_3	2,4-di-F	Q-162	CH_2CF_3	4-Cl
Q-169	CH_2CF_3	4-F	Q-169	CH_2CF_3	2,4-di-F	Q-169	CH_2CF_3	4-Cl

TABLE 2



R^1 is C_2H_5, R^2 is B-1

Q	Q	Q	Q	Q	Q	Q	Q	Q
Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9
Q-10	Q-11	Q-12	Q-13	Q-14	Q-15	Q-16	Q-17	Q-18
Q-19	Q-20	Q-21	Q-22	Q-23	Q-24	Q-25	Q-26	Q-27
Q-28	Q-29	Q-30	Q-31	Q-32	Q-33	Q-34	Q-35	Q-36
Q-37	Q-38	Q-39	Q-40	Q-41	Q-42	Q-43	Q-44	Q-45
Q-46	Q-47	Q-48	Q-49	Q-50	Q-51	Q-52	Q-53	Q-54
Q-55	Q-56	Q-57	Q-58	Q-59	Q-60	Q-61	Q-62	Q-63
Q-64	Q-65	Q-66	Q-67	Q-68	Q-69	Q-70	Q-71	Q-72
Q-73	Q-74	Q-75	Q-76	Q-77	Q-78	Q-79	Q-80	Q-81
Q-82	Q-83	Q-84	Q-85	Q-86	Q-87	Q-88	Q-89	Q-90
Q-91	Q-92	Q-93	Q-94	Q-95	Q-96	Q-97	Q-98	Q-99
Q-100	Q-101	Q-102	Q-103	Q-104	Q-105	Q-106	Q-107	Q-108
Q-109	Q-110	Q-111	Q-112	Q-113	Q-114	Q-115	Q-116	Q-117
Q-118	Q-119	Q-120	Q-121	Q-122	Q-123	Q-124	Q-125	Q-126
Q-127	Q-128	Q-129	Q-130	Q-131	Q-132	Q-133	Q-134	Q-135
Q-136	Q-137	Q-138	Q-139	Q-140	Q-141	Q-142	Q-143	Q-144
Q-145	Q-146	Q-147	Q-148	Q-149	Q-150	Q-151	Q-152	Q-153
Q-154	Q-155	Q-156	Q-157	Q-158	Q-159	Q-160	Q-161	Q-162
Q-163	Q-164	Q-165	Q-166	Q-167	Q-168	Q-169	Q-170	Q-171
Q-172	Q-173	Q-174	Q-175					

R^1 is i-C_3H_7, R^2 is B-4

Q	Q	Q	Q	Q	Q	Q	Q	Q
Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9
Q-10	Q-11	Q-12	Q-13	Q-14	Q-15	Q-16	Q-17	Q-18
Q-19	Q-20	Q-21	Q-22	Q-23	Q-24	Q-25	Q-26	Q-27
Q-28	Q-29	Q-30	Q-31	Q-32	Q-33	Q-34	Q-35	Q-36
Q-37	Q-38	Q-39	Q-40	Q-41	Q-42	Q-43	Q-44	Q-45
Q-46	Q-47	Q-48	Q-49	Q-50	Q-51	Q-52	Q-53	Q-54
Q-55	Q-56	Q-57	Q-58	Q-59	Q-60	Q-61	Q-62	Q-63
Q-64	Q-65	Q-66	Q-67	Q-68	Q-69	Q-70	Q-71	Q-72
Q-73	Q-74	Q-75	Q-76	Q-77	Q-78	Q-79	Q-80	Q-81
Q-82	Q-83	Q-84	Q-85	Q-86	Q-87	Q-88	Q-89	Q-90
Q-91	Q-92	Q-93	Q-94	Q-95	Q-96	Q-97	Q-98	Q-99
Q-100	Q-101	Q-102	Q-103	Q-104	Q-105	Q-106	Q-107	Q-108
Q-109	Q-110	Q-111	Q-112	Q-113	Q-114	Q-115	Q-116	Q-117
Q-118	Q-119	Q-120	Q-121	Q-122	Q-123	Q-124	Q-125	Q-126
Q-127	Q-128	Q-129	Q-130	Q-131	Q-132	Q-133	Q-134	Q-135
Q-136	Q-137	Q-138	Q-139	Q-140	Q-141	Q-142	Q-143	Q-144
Q-145	Q-146	Q-147	Q-148	Q-149	Q-150	Q-151	Q-152	Q-153
Q-154	Q-155	Q-156	Q-157	Q-158	Q-159	Q-160	Q-161	Q-162
Q-163	Q-164	Q-165	Q-166	Q-167	Q-168	Q-169	Q-170	Q-171
Q-172	Q-173	Q-174	Q-175					

R^1 is C_2H_5, R^2 is B-4

Q	Q	Q	Q	Q	Q	Q	Q	Q
Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9
Q-10	Q-11	Q-12	Q-13	Q-14	Q-15	Q-16	Q-17	Q-18
Q-19	Q-20	Q-21	Q-22	Q-23	Q-24	Q-25	Q-26	Q-27
Q-28	Q-29	Q-30	Q-31	Q-32	Q-33	Q-34	Q-35	Q-36
Q-37	Q-38	Q-39	Q-40	Q-41	Q-42	Q-43	Q-44	Q-45
Q-46	Q-47	Q-48	Q-49	Q-50	Q-51	Q-52	Q-53	Q-54
Q-55	Q-56	Q-57	Q-58	Q-59	Q-60	Q-61	Q-62	Q-63
Q-64	Q-65	Q-66	Q-67	Q-68	Q-69	Q-70	Q-71	Q-72
Q-73	Q-74	Q-75	Q-76	Q-77	Q-78	Q-79	Q-80	Q-81
Q-82	Q-83	Q-84	Q-85	Q-86	Q-87	Q-88	Q-89	Q-90

Q-91	Q-92	Q-93	Q-94	Q-95	Q-96	Q-97	Q-98	Q-99
Q-100	Q-101	Q-102	Q-103	Q-104	Q-105	Q-106	Q-107	Q-108
Q-109	Q-110	Q-111	Q-112	Q-113	Q-114	Q-115	Q-116	Q-117
Q-118	Q-119	Q-120	Q-121	Q-122	Q-123	Q-124	Q-125	Q-126
Q-127	Q-128	Q-129	Q-130	Q-131	Q-132	Q-133	Q-134	Q-135
Q-136	Q-137	Q-138	Q-139	Q-140	Q-141	Q-142	Q-143	Q-144
Q-145	Q-146	Q-147	Q-148	Q-149	Q-150	Q-151	Q-152	Q-153
Q-154	Q-155	Q-156	Q-157	Q-158	Q-159	Q-160	Q-161	Q-162
Q-163	Q-164	Q-165	Q-166	Q-167	Q-168	Q-169	Q-170	Q-171
Q-172	Q-173	Q-174	Q-175					

R^1 is C_2H_5, R^2 is B-10

Q	Q	Q	Q	Q	Q	Q	Q	Q
Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9
Q-10	Q-11	Q-12	Q-13	Q-14	Q-15	Q-16	Q-17	Q-18
Q-19	Q-20	Q-21	Q-22	Q-23	Q-24	Q-25	Q-26	Q-27
Q-28	Q-29	Q-30	Q-31	Q-32	Q-33	Q-34	Q-35	Q-36
Q-37	Q-38	Q-39	Q-40	Q-41	Q-42	Q-43	Q-44	Q-45
Q-46	Q-47	Q-48	Q-49	Q-50	Q-51	Q-52	Q-53	Q-54
Q-55	Q-56	Q-57	Q-58	Q-59	Q-60	Q-61	Q-62	Q-63
Q-64	Q-65	Q-66	Q-67	Q-68	Q-69	Q-70	Q-71	Q-72
Q-73	Q-74	Q-75	Q-76	Q-77	Q-78	Q-79	Q-80	Q-81
Q-82	Q-83	Q-84	Q-85	Q-86	Q-87	Q-88	Q-89	Q-90
Q-91	Q-92	Q-93	Q-94	Q-95	Q-96	Q-97	Q-98	Q-99
Q-100	Q-101	Q-102	Q-103	Q-104	Q-105	Q-106	Q-107	Q-108
Q-109	Q-110	Q-111	Q-112	Q-113	Q-114	Q-115	Q-116	Q-117
Q-118	Q-119	Q-120	Q-121	Q-122	Q-123	Q-124	Q-125	Q-126
Q-127	Q-128	Q-129	Q-130	Q-131	Q-132	Q-133	Q-134	Q-135
Q-136	Q-137	Q-138	Q-139	Q-140	Q-141	Q-142	Q-143	Q-144
Q-145	Q-146	Q-147	Q-148	Q-149	Q-150	Q-151	Q-152	Q-153
Q-154	Q-155	Q-156	Q-157	Q-158	Q-159	Q-160	Q-161	Q-162
Q-163	Q-164	Q-165	Q-166	Q-167	Q-168	Q-169	Q-170	Q-171
Q-172	Q-173	Q-174	Q-175					

R^1 is i-C_3H_7, R^2 is B-10

Q	Q	Q	Q	Q	Q	Q	Q	Q
Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9
Q-10	Q-11	Q-12	Q-13	Q-14	Q-15	Q-16	Q-17	Q-18
Q-19	Q-20	Q-21	Q-22	Q-23	Q-24	Q-25	Q-26	Q-27
Q-28	Q-29	Q-30	Q-31	Q-32	Q-33	Q-34	Q-35	Q-36
Q-37	Q-38	Q-39	Q-40	Q-41	Q-42	Q-43	Q-44	Q-45
Q-46	Q-47	Q-48	Q-49	Q-50	Q-51	Q-52	Q-53	Q-54
Q-55	Q-56	Q-57	Q-58	Q-59	Q-60	Q-61	Q-62	Q-63
Q-64	Q-65	Q-66	Q-67	Q-68	Q-69	Q-70	Q-71	Q-72
Q-73	Q-74	Q-75	Q-76	Q-77	Q-78	Q-79	Q-80	Q-81
Q-82	Q-83	Q-84	Q-85	Q-86	Q-87	Q-88	Q-89	Q-90
Q-91	Q-92	Q-93	Q-94	Q-95	Q-96	Q-97	Q-98	Q-99
Q-100	Q-101	Q-102	Q-103	Q-104	Q-105	Q-106	Q-107	Q-108
Q-109	Q-110	Q-111	Q-112	Q-113	Q-114	Q-115	Q-116	Q-117
Q-118	Q-119	Q-120	Q-121	Q-122	Q-123	Q-124	Q-125	Q-126
Q-127	Q-128	Q-129	Q-130	Q-131	Q-132	Q-133	Q-134	Q-135
Q-136	Q-137	Q-138	Q-139	Q-140	Q-141	Q-142	Q-143	Q-144
Q-145	Q-146	Q-147	Q-148	Q-149	Q-150	Q-151	Q-152	Q-153
Q-154	Q-155	Q-156	Q-157	Q-158	Q-159	Q-160	Q-161	Q-162
Q-163	Q-164	Q-165	Q-166	Q-167	Q-168	Q-169	Q-170	Q-171
Q-172	Q-173	Q-174	Q-175					

Q	R^1	R^2	Q	R^1	R^2	Q	R^1	R^2
Q-2	Cyclopropyl	B-10	Q-2	Allyl	B-4	Q-2	Cyclohexyl	B-18
Q-16	Cyclopropyl	B-10	Q-16	Allyl	B-4	Q-16	Cyclohexyl	B-18
Q-24	Cyclopropyl	B-10	Q-24	Allyl	B-4	Q-24	Cyclohexyl	B-18
Q-29	Cyclopropyl	B-10	Q-29	Allyl	B-4	Q-29	Cyclohexyl	B-18
Q-57	Cyclopropyl	B-10	Q-57	Allyl	B-4	Q-57	Cyclohexyl	B-18
Q-71	Cyclopropyl	B-10	Q-71	Allyl	B-4	Q-71	Cyclohexyl	B-18
Q-100	Cyclopropyl	B-10	Q-100	Allyl	B-4	Q-100	Cyclohexyl	B-18
Q-119	Cyclopropyl	B-10	Q-119	Allyl	B-4	Q-119	Cyclohexyl	B-18
Q-120	Cyclopropyl	B-10	Q-120	Allyl	B-4	Q-120	Cyclohexyl	B-18
Q-126	Cyclopropyl	B-10	Q-126	Allyl	B-4	Q-126	Cycl hexyl	B-18
Q-130	Cyclopropyl	B-10	Q-130	Allyl	B-4	Q-130	Cyclohexyl	B-18

Q-144	Cyclopropyl	B-10	Q-144	Allyl	B-4	Q-144	Cyclohexyl	B-18
Q-162	Cyclopropyl	B-10	Q-162	Allyl	B-4	Q-162	Cyclohexyl	B-18
Q-169	Cyclopropyl	B-10	Q-169	Allyl	B-4	Q-169	Cyclohexyl	B-18
Q-2	n-C_4H_9	B-10	Q-2	Cyclopropyl	B-4	Q-2	i-C_3H_7	B-18
Q-16	n-C_4H_9	B-10	Q-16	Cyclopropyl	B-4	Q-16	i-C_3H_7	B-18
Q-24	n-C_4H_9	B-10	Q-24	Cyclopropyl	B-4	Q-24	i-C_3H_7	B-18
Q-29	n-C_4H_9	B-10	Q-29	Cyclopropyl	B-4	Q-29	i-C_3H_7	B-18
Q-57	n-C_4H_9	B-10	Q-57	Cyclopropyl	B-4	Q-57	i-C_3H_7	B-18
Q-71	n-C_4H_9	B-10	Q-71	Cyclopropyl	B-4	Q-71	i-C_3H_7	B-18
Q-100	n-C_4H_9	B-10	Q-100	Cyclopropyl	B-4	Q-100	i-C_3H_7	B-18
Q-119	n-C_4H_9	B-10	Q-119	Cyclopropyl	B-4	Q-119	i-C_3H_7	B-18
Q-120	n-C_4H_9	B-10	Q-120	Cyclopropyl	B-4	Q-120	i-C_3H_7	B-18
Q-126	n-C_4H_9	B-10	Q-126	Cyclopropyl	B-4	Q-126	i-C_3H_7	B-18
Q-130	n-C_4H_9	B-10	Q-130	Cyclopropyl	B-4	Q-130	i-C_3H_7	B-18
Q-144	n-C_4H_9	B-10	Q-144	Cyclopropyl	B-4	Q-144	i-C_3H_7	B-18
Q-162	n-C_4H_9	B-10	Q-162	Cyclopropyl	B-4	Q-162	i-C_3H_7	B-18
Q-169	n-C_4H_9	B-10	Q-169	Cyclopropyl	B-4	Q-169	i-C_3H_7	B-18
Q-2	$CH_2CH_2OCH_3$	B-10	Q-2	CH_3	B-4	Q-2	Cyclohexyl	B-17
Q-16	$CH_2CH_2OCH_3$	B-10	Q-16	CH_3	B-4	Q-16	Cyclohexyl	B-17
Q-24	$CH_2CH_2OCH_3$	B-10	Q-24	CH_3	B-4	Q-24	Cyclohexyl	B-17
Q-29	$CH_2CH_2OCH_3$	B-10	Q-29	CH_3	B-4	Q-29	Cyclohexyl	B-17
Q-57	$CH_2CH_2OCH_3$	B-10	Q-57	CH_3	B-4	Q-57	Cyclohexyl	B-17
Q-71	$CH_2CH_2OCH_3$	B-10	Q-71	CH_3	B-4	Q-71	Cyclohexyl	B-17
Q-100	$CH_2CH_2OCH_3$	B-10	Q-100	CH_3	B-4	Q-100	Cyclohexyl	B-17
Q-119	$CH_2CH_2OCH_3$	B-10	Q-119	CH_3	B-4	Q-119	Cyclohexyl	B-17
Q-120	$CH_2CH_2OCH_3$	B-10	Q-120	CH_3	B-4	Q-120	Cyclohexyl	B-17
Q-126	$CH_2CH_2OCH_3$	B-10	Q-126	CH_3	B-4	Q-126	Cyclohexyl	B-17
Q-130	$CH_2CH_2OCH_3$	B-10	Q-130	CH_3	B-4	Q-130	Cyclohexyl	B-17
Q-144	$CH_2CH_2OCH_3$	B-10	Q-144	CH_3	B-4	Q-144	Cyclohexyl	B-17
Q-162	$CH_2CH_2OCH_3$	B-10	Q-162	CH_3	B-4	Q-162	Cyclohexyl	B-17
Q-169	$CH_2CH_2OCH_3$	B-10	Q-169	CH_3	B-4	Q-169	Cyclohexyl	B-17
Q-2	CH_3	B-10	Q-2	CH_3	B-4	Q-2	C_2H_5	B-17
Q-16	CH_3	B-10	Q-16	CH_3	B-4	Q-16	C_2H_5	B-17
Q-24	CH_3	B-10	Q-24	CH_3	B-4	Q-24	C_2H_5	B-17

Q-29	CH_3	B-10	Q-29	CH_3	B-4	Q-29	C_2H_5	B-17
Q-57	CH_3	B-10	Q-57	CH_3	B-4	Q-57	C_2H_5	B-17
Q-71	CH_3	B-10	Q-71	CH_3	B-4	Q-71	C_2H_5	B-17
Q-100	CH_3	B-10	Q-100	CH_3	B-4	Q-100	C_2H_5	B-17
Q-119	CH_3	B-10	Q-119	CH_3	B-4	Q-119	C_2H_5	B-17
Q-120	CH_3	B-10	Q-120	CH_3	B-4	Q-120	C_2H_5	B-17
Q-126	CH_3	B-10	Q-126	CH_3	B-4	Q-126	C_2H_5	B-17
Q-130	CH_3	B-10	Q-130	CH_3	B-4	Q-130	C_2H_5	B-17
Q-144	CH_3	B-10	Q-144	CH_3	B-4	Q-144	C_2H_5	B-17
Q-162	CH_3	B-10	Q-162	CH_3	B-4	Q-162	C_2H_5	B-17
Q-169	CH_3	B-10	Q-169	CH_3	B-4	Q-169	C_2H_5	B-17
Q-2	n-C_6H_{13}	B-10	Q-2	CH_2CF_3	B-4	Q-2	n-C_3H_7	B-6
Q-16	n-C_6H_{13}	B-10	Q-16	CH_2CF_3	B-4	Q-16	n-C_3H_7	B-6
Q-24	n-C_6H_{13}	B-10	Q-24	CH_2CF_3	B-4	Q-24	n-C_3H_7	B-6
Q-29	n-C_6H_{13}	B-10	Q-29	CH_2CF_3	B-4	Q-29	n-C_3H_7	B-6
Q-57	n-C_6H_{13}	B-10	Q-57	CH_2CF_3	B-4	Q-57	n-C_3H_7	B-6
Q-71	n-C_6H_{13}	B-10	Q-71	CH_2CF_3	B-4	Q-71	n-C_3H_7	B-6
Q-100	n-C_6H_{13}	B-10	Q-100	CH_2CF_3	B-4	Q-100	n-C_3H_7	B-6
Q-119	n-C_6H_{13}	B-10	Q-119	CH_2CF_3	B-4	Q-119	n-C_3H_7	B-6
Q-120	n-C_6H_{13}	B-10	Q-120	CH_2CF_3	B-4	Q-120	n-C_3H_7	B-6
Q-126	n-C_6H_{13}	B-10	Q-126	CH_2CF_3	B-4	Q-126	n-C_3H_7	B-6
Q-130	n-C_6H_{13}	B-10	Q-130	CH_2CF_3	B-4	Q-130	n-C_3H_7	B-6
Q-144	n-C_6H_{13}	B-10	Q-144	CH_2CF_3	B-4	Q-144	n-C_3H_7	B-6
Q-162	n-C_6H_{13}	B-10	Q-162	CH_2CF_3	B-4	Q-162	n-C_3H_7	B-6
Q-169	n-C_6H_{13}	B-10	Q-169	CH_2CF_3	B-4	Q-169	n-C_3H_7	B-6

Q	R^1	R^2	Q	R^1	R^2	Q	R^1	R^2
Q-2	C_2H_5	B-2	Q-2	C_2H_5	B-5	Q-2	C_2H_5	B-8
Q-16	C_2H_5	B-2	Q-16	C_2H_5	B-5	Q-16	C_2H_5	B-8
Q-24	C_2H_5	B-2	Q-24	C_2H_5	B-5	Q-24	C_2H_5	B-8
Q-29	C_2H_5	B-2	Q-29	C_2H_5	B-5	Q-29	C_2H_5	B-8
Q-57	C_2H_5	B-2	Q-57	C_2H_5	B-5	Q-57	C_2H_5	B-8
Q-71	C_2H_5	B-2	Q-71	C_2H_5	B-5	Q-71	C_2H_5	B-8
Q-100	C_2H_5	B-2	Q-100	C_2H_5	B-5	Q-100	C_2H_5	B-8

Q-119	C_2H_5	B-2	Q-119	C_2H_5	B-5	Q-119	C_2H_5	B-8
Q-120	C_2H_5	B-2	Q-120	C_2H_5	B-5	Q-120	C_2H_5	B-8
Q-126	C_2H_5	B-2	Q-126	C_2H_5	B-5	Q-126	C_2H_5	B-8
Q-130	C_2H_5	B-2	Q-130	C_2H_5	B-5	Q-130	C_2H_5	B-8
Q-144	C_2H_5	B-2	Q-144	C_2H_5	B-5	Q-144	C_2H_5	B-8
Q-162	C_2H_5	B-2	Q-162	C_2H_5	B-5	Q-162	C_2H_5	B-8
Q-169	C_2H_5	B-2	Q-169	C_2H_5	B-5	Q-169	C_2H_5	B-8
Q-2	C_3H_7	B-2	Q-2	i-C_3H_7	B-6	Q-2	Cyclopropyl	B-8
Q-16	C_3H_7	B-2	Q-16	i-C_3H_7	B-6	Q-16	Cyclopropyl	B-8
Q-24	C_3H_7	B-2	Q-24	i-C_3H_7	B-6	Q-24	Cyclopropyl	B-8
Q-29	C_3H_7	B-2	Q-29	i-C_3H_7	B-6	Q-29	Cyclopropyl	B-8
Q-57	C_3H_7	B-2	Q-57	i-C_3H_7	B-6	Q-57	Cyclopropyl	B-8
Q-71	C_3H_7	B-2	Q-71	i-C_3H_7	B-6	Q-71	Cyclopropyl	B-8
Q-100	C_3H_7	B-2	Q-100	i-C_3H_7	B-6	Q-100	Cyclopropyl	B-8
Q-119	C_3H_7	B-2	Q-119	i-C_3H_7	B-6	Q-119	Cyclopropyl	B-8
Q-120	C_3H_7	B-2	Q-120	i-C_3H_7	B-6	Q-120	Cyclopropyl	B-8
Q-126	C_3H_7	B-2	Q-126	i-C_3H_7	B-6	Q-126	Cyclopropyl	B-8
Q-130	C_3H_7	B-2	Q-130	i-C_3H_7	B-6	Q-130	Cyclopropyl	B-8
Q-144	C_3H_7	B-2	Q-144	i-C_3H_7	B-6	Q-144	Cyclopropyl	B-8
Q-162	C_3H_7	B-2	Q-162	i-C_3H_7	B-6	Q-162	Cyclopropyl	B-8
Q-169	C_3H_7	B-2	Q-169	i-C_3H_7	B-6	Q-169	Cyclopropyl	B-8
Q-2	C_2H_5	B-3	Q-2	C_2H_5	B-6	Q-2	C_2H_5	B-9
Q-16	C_2H_5	B-3	Q-16	C_2H_5	B-6	Q-16	C_2H_5	B-9
Q-24	C_2H_5	B-3	Q-24	C_2H_5	B-6	Q-24	C_2H_5	B-9
Q-29	C_2H_5	B-3	Q-29	C_2H_5	B-6	Q-29	C_2H_5	B-9
Q-57	C_2H_5	B-3	Q-57	C_2H_5	B-6	Q-57	C_2H_5	B-9
Q-71	C_2H_5	B-3	Q-71	C_2H_5	B-6	Q-71	C_2H_5	B-9
Q-100	C_2H_5	B-3	Q-100	C_2H_5	B-6	Q-100	C_2H_5	B-9
Q-119	C_2H_5	B-3	Q-119	C_2H_5	B-6	Q-119	C_2H_5	B-9
Q-120	C_2H_5	B-3	Q-120	C_2H_5	B-6	Q-120	C_2H_5	B-9
Q-126	C_2H_5	B-3	Q-126	C_2H_5	B-6	Q-126	C_2H_5	B-9
Q-130	C_2H_5	B-3	Q-130	C_2H_5	B-6	Q-130	C_2H_5	B-9
Q-144	C_2H_5	B-3	Q-144	C_2H_5	B-6	Q-144	C_2H_5	B-9
Q-162	C_2H_5	B-3	Q-162	C_2H_5	B-6	Q-162	C_2H_5	B-9

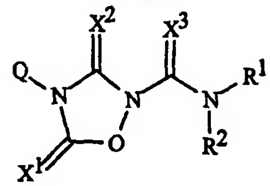
Q-169	C_2H_5	B-3	Q-169	C_2H_5	B-6	Q-169	C_2H_5	B-9
Q-2	i-C_3H_7	B-3	Q-2	C_2H_5	B-7	Q-2	i-C_3H_7	B-9
Q-16	i-C_3H_7	B-3	Q-16	C_2H_5	B-7	Q-16	i-C_3H_7	B-9
Q-24	i-C_3H_7	B-3	Q-24	C_2H_5	B-7	Q-24	i-C_3H_7	B-9
Q-29	i-C_3H_7	B-3	Q-29	C_2H_5	B-7	Q-29	i-C_3H_7	B-9
Q-57	i-C_3H_7	B-3	Q-57	C_2H_5	B-7	Q-57	i-C_3H_7	B-9
Q-71	i-C_3H_7	B-3	Q-71	C_2H_5	B-7	Q-71	i-C_3H_7	B-9
Q-100	i-C_3H_7	B-3	Q-100	C_2H_5	B-7	Q-100	i-C_3H_7	B-9
Q-119	i-C_3H_7	B-3	Q-119	C_2H_5	B-7	Q-119	i-C_3H_7	B-9
Q-120	i-C_3H_7	B-3	Q-120	C_2H_5	B-7	Q-120	i-C_3H_7	B-9
Q-126	i-C_3H_7	B-3	Q-126	C_2H_5	B-7	Q-126	i-C_3H_7	B-9
Q-130	i-C_3H_7	B-3	Q-130	C_2H_5	B-7	Q-130	i-C_3H_7	B-9
Q-144	i-C_3H_7	B-3	Q-144	C_2H_5	B-7	Q-144	i-C_3H_7	B-9
Q-162	i-C_3H_7	B-3	Q-162	C_2H_5	B-7	Q-162	i-C_3H_7	B-9
Q-169	i-C_3H_7	B-3	Q-169	C_2H_5	B-7	Q-169	i-C_3H_7	B-9
Q-2	C_2H_5	B-4	Q-2	i-C_3H_7	B-7	Q-2	C_2H_5	B-11
Q-16	C_2H_5	B-4	Q-16	i-C_3H_7	B-7	Q-16	C_2H_5	B-11
Q-24	C_2H_5	B-4	Q-24	i-C_3H_7	B-7	Q-24	C_2H_5	B-11
Q-29	C_2H_5	B-4	Q-29	i-C_3H_7	B-7	Q-29	C_2H_5	B-11
Q-57	C_2H_5	B-4	Q-57	i-C_3H_7	B-7	Q-57	C_2H_5	B-11
Q-71	C_2H_5	B-4	Q-71	i-C_3H_7	B-7	Q-71	C_2H_5	B-11
Q-100	C_2H_5	B-4	Q-100	i-C_3H_7	B-7	Q-100	C_2H_5	B-11
Q-119	C_2H_5	B-4	Q-119	i-C_3H_7	B-7	Q-119	C_2H_5	B-11
Q-120	C_2H_5	B-4	Q-120	i-C_3H_7	B-7	Q-120	C_2H_5	B-11
Q-126	C_2H_5	B-4	Q-126	i-C_3H_7	B-7	Q-126	C_2H_5	B-11
Q-130	C_2H_5	B-4	Q-130	i-C_3H_7	B-7	Q-130	C_2H_5	B-11
Q-144	C_2H_5	B-4	Q-144	i-C_3H_7	B-7	Q-144	C_2H_5	B-11
Q-162	C_2H_5	B-4	Q-162	i-C_3H_7	B-7	Q-162	C_2H_5	B-11
Q-169	C_2H_5	B-4	Q-169	i-C_3H_7	B-7	Q-169	C_2H_5	B-11

Q	R^1	R^2	Q	R^1	R^2	Q	R^1	R^2
Q-2	Cyclopropyl	B-11	Q-2	C_2H_5	B-14	Q-2	i-C_3H_7	B-16
Q-16	Cyclopropyl	B-11	Q-16	C_2H_5	B-14	Q-16	i-C_3H_7	B-16
Q-24	Cyclopropyl	B-11	Q-24	C_2H_5	B-14	Q-24	i-C_3H_7	B-16

Q-29	Cyclopropyl	B-11	Q-29	C_2H_5	B-14	Q-29	i-C_3H_7	B-16
Q-57	Cyclopropyl	B-11	Q-57	C_2H_5	B-14	Q-57	i-C_3H_7	B-16
Q-71	Cyclopropyl	B-11	Q-71	C_2H_5	B-14	Q-71	i-C_3H_7	B-16
Q-100	Cyclopropyl	B-11	Q-100	C_2H_5	B-14	Q-100	i-C_3H_7	B-16
Q-119	Cyclopropyl	B-11	Q-119	C_2H_5	B-14	Q-119	i-C_3H_7	B-16
Q-120	Cyclopropyl	B-11	Q-120	C_2H_5	B-14	Q-120	i-C_3H_7	B-16
Q-126	Cyclopropyl	B-11	Q-126	C_2H_5	B-14	Q-126	i-C_3H_7	B-16
Q-130	Cyclopropyl	B-11	Q-130	C_2H_5	B-14	Q-130	i-C_3H_7	B-16
Q-144	Cyclopropyl	B-11	Q-144	C_2H_5	B-14	Q-144	i-C_3H_7	B-16
Q-162	Cyclopropyl	B-11	Q-162	C_2H_5	B-14	Q-162	i-C_3H_7	B-16
Q-169	Cyclopropyl	B-11	Q-169	C_2H_5	B-14	Q-169	i-C_3H_7	B-16
Q-2	C_2H_5	B-12	Q-2	i-C_3H_7	B-14	Q-2	t-C_4H_9	B-10
Q-16	C_2H_5	B-12	Q-16	i-C_3H_7	B-14	Q-16	t-C_4H_9	B-10
Q-24	C_2H_5	B-12	Q-24	i-C_3H_7	B-14	Q-24	t-C_4H_9	B-10
Q-29	C_2H_5	B-12	Q-29	i-C_3H_7	B-14	Q-29	t-C_4H_9	B-10
Q-57	C_2H_5	B-12	Q-57	i-C_3H_7	B-14	Q-57	t-C_4H_9	B-10
Q-71	C_2H_5	B-12	Q-71	i-C_3H_7	B-14	Q-71	t-C_4H_9	B-10
Q-100	C_2H_5	B-12	Q-100	i-C_3H_7	B-14	Q-100	t-C_4H_9	B-10
Q-119	C_2H_5	B-12	Q-119	i-C_3H_7	B-14	Q-119	t-C_4H_9	B-10
Q-120	C_2H_5	B-12	Q-120	i-C_3H_7	B-14	Q-120	t-C_4H_9	B-10
Q-126	C_2H_5	B-12	Q-126	i-C_3H_7	B-14	Q-126	t-C_4H_9	B-10
Q-130	C_2H_5	B-12	Q-130	i-C_3H_7	B-14	Q-130	t-C_4H_9	B-10
Q-144	C_2H_5	B-12	Q-144	i-C_3H_7	B-14	Q-144	t-C_4H_9	B-10
Q-162	C_2H_5	B-12	Q-162	i-C_3H_7	B-14	Q-162	t-C_4H_9	B-10
Q-169	C_2H_5	B-12	Q-169	i-C_3H_7	B-14	Q-169	t-C_4H_9	B-10
Q-2	i-C_3H_7	B-12	Q-2	C_2H_5	B-15	Q-2	i-C_4H_9	B-10
Q-16	i-C_3H_7	B-12	Q-16	C_2H_5	B-15	Q-16	i-C_4H_9	B-10
Q-24	i-C_3H_7	B-12	Q-24	C_2H_5	B-15	Q-24	i-C_4H_9	B-10
Q-29	i-C_3H_7	B-12	Q-29	C_2H_5	B-15	Q-29	i-C_4H_9	B-10
Q-57	i-C_3H_7	B-12	Q-57	C_2H_5	B-15	Q-57	i-C_4H_9	B-10
Q-71	i-C_3H_7	B-12	Q-71	C_2H_5	B-15	Q-71	i-C_4H_9	B-10
Q-100	i-C_3H_7	B-12	Q-100	C_2H_5	B-15	Q-100	i-C_4H_9	B-10
Q-119	i-C_3H_7	B-12	Q-119	C_2H_5	B-15	Q-119	i-C_4H_9	B-10
Q-120	i-C_3H_7	B-12	Q-120	C_2H_5	B-15	Q-120	i-C_4H_9	B-10

Q-126	i-C_3H_7	B-12	Q-126	C_2H_5	B-15	Q-126	i-C_4H_9	B-10
Q-130	i-C_3H_7	B-12	Q-130	C_2H_5	B-15	Q-130	i-C_4H_9	B-10
Q-144	i-C_3H_7	B-12	Q-144	C_2H_5	B-15	Q-144	i-C_4H_9	B-10
Q-162	i-C_3H_7	B-12	Q-162	C_2H_5	B-15	Q-162	i-C_4H_9	B-10
Q-169	i-C_3H_7	B-12	Q-169	C_2H_5	B-15	Q-169	i-C_4H_9	B-10
Q-2	C_2H_5	B-13	Q-2	i-C_3H_7	B-15	Q-2	CH_2CF_3	B-10
Q-16	C_2H_5	B-13	Q-16	i-C_3H_7	B-15	Q-16	CH_2CF_3	B-10
Q-24	C_2H_5	B-13	Q-24	i-C_3H_7	B-15	Q-24	CH_2CF_3	B-10
Q-29	C_2H_5	B-13	Q-29	i-C_3H_7	B-15	Q-29	CH_2CF_3	B-10
Q-57	C_2H_5	B-13	Q-57	i-C_3H_7	B-15	Q-57	CH_2CF_3	B-10
Q-71	C_2H_5	B-13	Q-71	i-C_3H_7	B-15	Q-71	CH_2CF_3	B-10
Q-100	C_2H_5	B-13	Q-100	i-C_3H_7	B-15	Q-100	CH_2CF_3	B-10
Q-119	C_2H_5	B-13	Q-119	i-C_3H_7	B-15	Q-119	CH_2CF_3	B-10
Q-120	C_2H_5	B-13	Q-120	i-C_3H_7	B-15	Q-120	CH_2CF_3	B-10
Q-126	C_2H_5	B-13	Q-126	i-C_3H_7	B-15	Q-126	CH_2CF_3	B-10
Q-130	C_2H_5	B-13	Q-130	i-C_3H_7	B-15	Q-130	CH_2CF_3	B-10
Q-144	C_2H_5	B-13	Q-144	i-C_3H_7	B-15	Q-144	CH_2CF_3	B-10
Q-162	C_2H_5	B-13	Q-162	i-C_3H_7	B-15	Q-162	CH_2CF_3	B-10
Q-169	C_2H_5	B-13	Q-169	i-C_3H_7	B-15	Q-169	CH_2CF_3	B-10
Q-2	i-C_3H_7	B-13	Q-2	C_2H_5	B-16	Q-2	n-C_3H_7	B-10
Q-16	i-C_3H_7	B-13	Q-16	C_2H_5	B-16	Q-16	n-C_3H_7	B-10
Q-24	i-C_3H_7	B-13	Q-24	C_2H_5	B-16	Q-24	n-C_3H_7	B-10
Q-29	i-C_3H_7	B-13	Q-29	C_2H_5	B-16	Q-29	n-C_3H_7	B-10
Q-57	i-C_3H_7	B-13	Q-57	C_2H_5	B-16	Q-57	n-C_3H_7	B-10
Q-71	i-C_3H_7	B-13	Q-71	C_2H_5	B-16	Q-71	n-C_3H_7	B-10
Q-100	i-C_3H_7	B-13	Q-100	C_2H_5	B-16	Q-100	n-C_3H_7	B-10
Q-119	i-C_3H_7	B-13	Q-119	C_2H_5	B-16	Q-119	n-C_3H_7	B-10
Q-120	i-C_3H_7	B-13	Q-120	C_2H_5	B-16	Q-120	n-C_3H_7	B-10
Q-126	i-C_3H_7	B-13	Q-126	C_2H_5	B-16	Q-126	n-C_3H_7	B-10
Q-130	i-C_3H_7	B-13	Q-130	C_2H_5	B-16	Q-130	n-C_3H_7	B-10
Q-144	i-C_3H_7	B-13	Q-144	C_2H_5	B-16	Q-144	n-C_3H_7	B-10
Q-162	i-C_3H_7	B-13	Q-162	C_2H_5	B-16	Q-162	n-C_3H_7	B-10
Q-169	i-C_3H_7	B-13	Q-169	C_2H_5	B-16	Q-169	n-C_3H_7	B-10

TABLE 3



Q	X^1	X^2	X^3	R^1	R^2
i-Pr	S	O	O	*i*-Pr	4-F-Phenyl
i-Pr	O	S	O	*i*-Pr	4-F-Phenyl
i-Pr	O	O	S	*i*-Pr	4-F-Phenyl
i-Pr	NMe	O	O	*i*-Pr	4-F-Phenyl
i-Pr	O	NMe	O	*i*-Pr	4-F-Phenyl
i-Pr	O	O	NMe	*i*-Pr	4-F-Phenyl
i-Pr	NCN	O	O	*i*-Pr	4-F-Phenyl
i-Pr	O	NCN	O	*i*-Pr	4-F-Phenyl
i-Pr	O	O	NCN	*i*-Pr	4-F-Phenyl
i-Pr	S	S	O	*i*-Pr	4-F-Phenyl
i-Pr	S	O	S	*i*-Pr	4-F-Phenyl
i-Pr	O	S	S	*i*-Pr	4-F-Phenyl
i-Pr	S	S	S	*i*-Pr	4-F-Phenyl
c-Pr	S	O	O	*i*-Pr	4-F-Phenyl
c-Pr	O	S	O	*i*-Pr	4-F-Phenyl
c-Pr	O	O	S	*i*-Pr	4-F-Phenyl
c-Pr	NMe	O	O	*i*-Pr	4-F-Phenyl
c-Pr	O	NMe	O	*i*-Pr	4-F-Phenyl
c-Pr	O	O	NMe	*i*-Pr	4-F-Phenyl
c-Pr	NCN	O	O	*i*-Pr	4-F-Phenyl
c-Pr	O	NCN	O	*i*-Pr	4-F-Phenyl
c-Pr	O	O	NCN	*i*-Pr	4-F-Phenyl
c-Pr	S	S	O	*i*-Pr	4-F-Phenyl
c-Pr	S	O	S	*i*-Pr	4-F-Phenyl
c-Pr	O	S	S	*i*-Pr	4-F-Phenyl
c-Pr	S	S	S	*i*-Pr	4-F-Phenyl
i-Pr	O	O	O	*i*-Pr	2-Cl-Pyridin-5-yl
i-Pr	O	O	O	*i*-Pr	2-F-Pyridin-5-yl

i-Pr	O	O	O	*i*-Pr	2-Br-Pyridin-5-yl
i-Pr	O	O	O	*i*-Pr	2-Me-Pyridin-5-yl
i-Pr	O	O	O	*i*-Pr	2-CF_3-Pyridin-5-yl
i-Pr	O	O	O	*i*-Pr	2-Cl-Pyrimidin-5-yl
i-Pr	O	O	O	*i*-Pr	2-F-Pyrimidin-5-yl
i-Pr	O	O	O	*i*-Pr	2-Br-Pyrimidin-5-yl
i-Pr	O	O	O	*i*-Pr	2-Me-Pyrimidin-5-yl
i-Pr	O	O	O	*i*-Pr	2-CF_3-Pyrimidin-5-yl
i-Pr	O	O	O	*i*-Pr	2-Cl-Thien-5-yl
i-Pr	O	O	O	*i*-Pr	2-F-Thien-5-yl
i-Pr	O	O	O	*i*-Pr	2-Me-Thien-5-yl
i-Pr	O	O	O	*i*-Pr	Thien-2-yl
i-Pr	O	O	O	*i*-Pr	Pyrimidin-5-yl
i-Pr	O	O	O	*i*-Pr	2-Cl-Pyridazin-5-yl
i-Pr	O	O	O	*i*-Pr	2-Cl-1,3,4-Thiadiazol-5-yl
i-Pr	O	O	O	*i*-Pr	2-CF_3-1,3,4-Thiadiazol-5-yl
i-Pr	O	O	O	*i*-Pr	2-Cl-Thiazol-5-yl
i-Pr	O	O	O	*i*-Pr	5-Cl-Thiazol-2-yl
c-Pr	O	O	O	*i*-Pr	Thien-2-yl
Et	O	O	O	*i*-Pr	Thien-2-yl
n-Pr	O	O	O	*i*-Pr	Thien-2-yl
Me	O	O	O	*i*-Pr	Thien-2-yl
i-Bu	O	O	O	*i*-Pr	Thien-2-yl
Allyl	O	O	O	*i*-Pr	Thien-2-yl
c-Hexyl	O	O	O	*i*-Pr	Thien-2-yl
c-Pr	O	O	O	*i*-Pr	2-Cl-Pyridin-5-yl
Et	O	O	O	*i*-Pr	2-Cl-Pyridin-5-yl
n-Pr	O	O	O	*i*-Pr	2-Cl-Pyridin-5-yl
Me	O	O	O	*i*-Pr	2-Cl-Pyridin-5-yl
i-Bu	O	O	O	*i*-Pr	2-Cl-Pyridin-5-yl
Allyl	O	O	O	*i*-Pr	2-Cl-Pyridin-5-yl
c-Hexyl	O	O	O	*i*-Pr	2-Cl-Pyridin-5-yl
s-Bu	O	O	O	*i*-Pr	2-Cl-Pyridin-5-yl
s-Bu	O	O	O	*i*-Pr	Thien-2-yl

Formulation/Utility

Compounds of this invention will generally be used as a formulation or composition with an agriculturally suitable carrier comprising at least one of a liquid diluent, a solid diluent or a surfactant. The formulation or composition ingredients are selected to be consistent with the physical properties of the active ingredient, mode of application and environmental factors such as soil type, moisture and temperature. Useful formulations include liquids such as solutions (including emulsifiable concentrates), suspensions, emulsions (including microemulsions and/or suspoemulsions) and the like which optionally can be thickened into gels. Useful formulations further include solids such as dusts, powders, granules, pellets, tablets, films, and the like which can be water-dispersible ("wettable") or water-soluble. Active ingredient can be (micro)encapsulated and further formed into a suspension or solid formulation; alternatively the entire formulation of active ingredient can be encapsulated (or "overcoated"). Encapsulation can control or delay release of the active ingredient. Sprayable formulations can be extended in suitable media and used at spray volumes from about one to several hundred liters per hectare. High-strength compositions are primarily used as intermediates for further formulation.

The formulations will typically contain effective amounts of active ingredient, diluent and surfactant within the following approximate ranges which add up to 100 percent by weight.

	Weight Percent		
	Active Ingredient	Diluent	Surfactant
Water-Dispersible and Water-soluble Granules, Tablets and Powders.	5–90	0–94	1–15
Suspensions, Emulsions, Solutions (including Emulsifiable Concentrates)	5–50	40–95	0–15
Dusts	1–25	70–99	0–5
Granules and Pellets	0.01–99	5–99.99	0–15
High Strength Compositions	90–99	0–10	0–2

Typical solid diluents are described in Watkins, et al., *Handbook of Insecticide Dust Diluents and Carriers*, 2nd Ed., Dorland Books, Caldwell, New Jersey. Typical liquid diluents are described in Marsden, *Solvents Guide*, 2nd Ed., Interscience, New York, 1950. *McCutcheon's Detergents and Emulsifiers Annual*, Allured Publ. Corp., Ridgewood, New Jersey, as well as Sisely and Wood, *Encyclopedia of Surface Active Agents*, Chemical Publ. Co., Inc., New York, 1964, list surfactants and recommended uses. All formulations can

contain minor amounts of additives to reduce foam, caking, corrosion, microbiological growth and the like, or thickeners to increase viscosity.

Surfactants include, for example, polyethoxylated alcohols, polyethoxylated alkylphenols, polyethoxylated sorbitan fatty acid esters, dialkyl sulfosuccinates, alkyl sulfates, alkylbenzene sulfonates, organosilicones, *N,N*-dialkyltaurates, lignin sulfonates, naphthalene sulfonate formaldehyde condensates, polycarboxylates, and polyoxyethylene/polyoxypropylene block copolymers. Solid diluents include, for example, clays such as bentonite, montmorillonite, attapulgite and kaolin, starch, sugar, silica, talc, diatomaceous earth, urea, calcium carbonate, sodium carbonate and bicarbonate, and sodium sulfate. Liquid diluents include, for example, water, *N,N*-dimethylformamide, dimethyl sulfoxide, *N*-alkylpyrrolidone, ethylene glycol, polypropylene glycol, paraffins, alkylbenzenes, alkylnaphthalenes, oils of olive, castor, linseed, tung, sesame, corn, peanut, cotton-seed, soybean, rape-seed and coconut, fatty acid esters, ketones such as cyclohexanone, 2-heptanone, isophorone and 4-hydroxy-4-methyl-2-pentanone, and alcohols such as methanol, cyclohexanol, decanol and tetrahydrofurfuryl alcohol.

Solutions, including emulsifiable concentrates, can be prepared by simply mixing the ingredients. Dusts and powders can be prepared by blending and, usually, grinding as in a hammer mill or fluid-energy mill. Suspensions are usually prepared by wet-milling; see, for example, U.S. 3,060,084. Granules and pellets can be prepared by spraying the active material upon preformed granular carriers or by agglomeration techniques. See Browning, "Agglomeration", *Chemical Engineering*, December 4, 1967, pp 147-48, *Perry's Chemical Engineer's Handbook*, 4th Ed., McGraw-Hill, New York, 1963, pages 8-57 and following, and WO 91/13546. Pellets can be prepared as described in U.S. 4,172,714. Water-dispersible and water-soluble granules can be prepared as taught in U.S. 4,144,050, U.S. 3,920,442 and DE 3,246,493. Tablets can be prepared as taught in U.S. 5,180,587, U.S. 5,232,701 and U.S. 5,208,030. Films can be prepared as taught in GB 2,095,558 and U.S. 3,299,566.

For further information regarding the art of formulation, see U.S. 3,235,361, Col. 6, line 16 through Col. 7, line 19 and Examples 10-41; U.S. 3,309,192, Col. 5, line 43 through Col. 7, line 62 and Examples 8, 12, 15, 39, 41, 52, 53, 58, 132, 138-140, 162-164, 166, 167 and 169-182; U.S. 2,891,855, Col. 3, line 66 through Col. 5, line 17 and Examples 1-4; Klingman, *Weed Control as a Science*, John Wiley and Sons, Inc., New York, 1961, pp 81-96; and Hance et al., *Weed Control Handbook*, 8th Ed., Blackwell Scientific Publications, Oxford, 1989.

In the following Examples, all percentages are by weight and all formulations are prepared in conventional ways. Compound numbers refer to compounds in Index Tables A-D below.

Example A

High Strength Concentrate

Compound 2	98.5%
silica aerogel	0.5%
synthetic amorphous fine silica	1.0%.

Example B

Wettable Powder

Compound 2	65.0%
dodecylphenol polyethylene glycol ether	2.0%
sodium ligninsulfonate	4.0%
sodium silicoaluminate	6.0%
montmorillonite (calcined)	23.0%.

Example C

Granule

Compound 2	10.0%
attapulgite granules (low volatile matter, 0.71/0.30 mm; U.S.S. No. 25–50 sieves)	90.0%.

Example D

Extruded Pellet

Compound 2	25.0%
anhydrous sodium sulfate	10.0%
crude calcium ligninsulfonate	5.0%
sodium alkylnaphthalenesulfonate	1.0%
calcium/magnesium bentonite	59.0%.

Test results indicate that the compounds of the present invention are highly active preemergent and postemergent herbicides or plant growth regulants. Many of them have utility for broad-spectrum pre- and/or postemergence weed control in areas where complete control of all vegetation is desired such as around fuel storage tanks, industrial storage areas, parking lots, drive-in theaters, air fields, river banks, irrigation and other waterways, around billboards and highway and railroad structures. Some of the compounds are useful for the control of selected grass and broadleaf weeds with tolerance to important agronomic crops which include but are not limited to alfalfa, barley, cotton, wheat, rape, sugar beets, corn (maize), sorghum, soybeans, rice, oats, peanuts, vegetables, tomato, potato, perennial

plantation crops including coffee, cocoa, oil palm, rubber, sugarcane, citrus, grapes, fruit trees, nut trees, banana, plantain, pineapple, hops, tea and forests such as eucalyptus and conifers (e.g., loblolly pine), and turf species (e.g., Kentucky bluegrass, St. Augustine grass, Kentucky fescue and Bermuda grass). Those skilled in the art will appreciate that not all compounds are equally effective against all weeds. Alternatively, the subject compounds are useful to modify plant growth.

A herbicidally effective amount of the compounds of this invention is determined by a number of factors. These factors include: formulation selected, method of application, amount and type of vegetation present, growing conditions, etc. In general, a herbicidally effective amount of compounds of this invention is 0.001 to 20 kg/ha with a preferred range of 0.004 to 1.0 kg/ha. One skilled in the art can easily determine the herbicidally effective amount necessary for the desired level of weed control.

Compounds of this invention can be used alone or in combination with other commercial herbicides, insecticides or fungicides. Compounds of this invention can also be used in combination with commercial herbicide safeners such as benoxacor, dichlormid and furilazole to increase safety to certain crops. A mixture of one or more of the following herbicides with a compound of this invention may be particularly useful for weed control: acetochlor, acifluorfen and its sodium salt, aclonifen, acrolein (2-propenal), alachlor, ametryn, amidosulfuron, amitrole, ammonium sulfamate, anilofos, asulam, atrazine, azafenidin, azimsulfuron, benazolin, benazolin-ethyl, benfluralin, benfuresate, bensulfuron-methyl, bensulide, bentazone, bifenox, bispyribac and its sodium salt, bromacil, bromoxynil, bromoxynil octanoate, butachlor, butralin, butroxydim (ICIA0500), butylate, caloxydim (BAS 620H), carfentrazone-ethyl, chlomethoxyfen, chloramben, chlorbromuron, chloridazon, chlorimuron-ethyl, chlornitrofen, chlorotoluron, chlorpropham, chlorsulfuron, chlorthal-dimethyl, cinmethylin, cinosulfuron, clethodim, clomazone, clopyralid, clopyralid-olamine, cyanazine, cycloate, cyclosulfamuron, 2,4-D and its butotyl, butyl, isoctyl and isopropyl esters and its dimethylammonium, diolamine and trolamine salts, daimuron, dalapon, dalapon-sodium, dazomet, 2,4-DB and its dimethylammonium, potassium and sodium salts, desmedipham, desmetryn, dicamba and its diglycolammonium, dimethylammonium, potassium and sodium salts, dichlobenil, dichlorprop, diclofop-methyl, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1*H*-imidazol-2-yl]-5-methyl-3-pyridinecarboxylic acid (AC 263,222), difenzoquat metilsulfate, diflufenican, dimepiperate, dimethenamid, dimethylarsinic acid and its sodium salt, dinitramine, diphenamid, diquat dibromide, dithiopyr, diuron, DNOC, endothal, EPTC, esprocarb, ethalfluralin, ethametsulfuron-methyl, ethofumesate, ethoxysulfuron, fenoxaprop-ethyl, fenoxaprop-P-ethyl, fenuron, fenuron-TCA, flamprop-methyl, flamprop-M-isopropyl,

flamprop-M-methyl, flazasulfuron, fluazifop-butyl, fluazifop-P-butyl, fluchloralin, flufenacet, flumetsulam, flumiclorac-pentyl, flumioxazin, fluometuron, fluoroglycofen-ethyl, flupoxam, flupyrsulfuron-methyl and its sodium salt, fluridone, flurochloridone, fluroxypyr, fluthiacet-methyl, fomesafen, fosamine-ammonium, glufosinate, glufosinate-ammonium, glyphosate, glyphosate-isopropylammonium, glyphosate-sesquisodium, glyphosate-trimesium, halosulfuron-methyl, haloxyfop-etotyl, haloxyfop-methyl, hexazinone, imazamethabenz-methyl, imazamox, imazapyr, imazaquin, imazaquin-ammonium, imazethapyr, imazethapyr-ammonium, imazosulfuron, ioxynil, ioxynil octanoate, ioxynil-sodium, isoproturon, isouron, isoxaben, isoxaflutole, lactofen, lenacil, linuron, maleic hydrazide, MCPA and its dimethylammonium, potassium and sodium salts, MCPA-isoctyl, mecoprop, mecoprop-P, mefenacet, mefluidide, metam-sodium, methabenzthiazuron, methylarsonic acid and its calcium, monoammonium, monosodium and disodium salts, methyl [[[1-[5-[2-chloro-4-(trifluoromethyl)phenoxy]-2-nitrophenyl]-2-methoxyethylidene]amino]oxy]acetate (AKH-7088), methyl 5-[[[[(4,6-dimethyl-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-1-(2-pyridinyl)-1*H*-pyrazole-4-carboxylate (NC-330), metobenzuron, metolachlor, metosulam, metoxuron, metribuzin, metsulfuron-methyl, molinate, monolinuron, napropamide, naptalam, neburon, nicosulfuron, norflurazon, oryzalin, oxadiazon, oxasulfuron, oxyfluorfen, paraquat dichloride, pebulate, pendimethalin, pentoxazone (KPP-314), perfluidone, phenmedipham, picloram, picloram-potassium, pretilachlor, primisulfuron-methyl, prometon, prometryn, propachlor, propanil, propaquizafop, propazine, propham, propyzamide, prosulfuron, pyrazolynate, pyrazosulfuron-ethyl, pyridate, pyriminobac-methyl, pyrithiobac, pyrithiobac-sodium, quinclorac, quizalofop-ethyl, quizalofop-P-ethyl, quizalofop-P-tefuryl, rimsulfuron, sethoxydim, siduron, simazine, sulcotrione (ICIA0051), sulfentrazone, sulfometuron-methyl, TCA, TCA-sodium, tebuthiuron, terbacil, terbuthylazine, terbutryn, thenylchlor, thiafluamide (BAY 11390), thifensulfuron-methyl, thiobencarb, tralkoxydim, tri-allate, triasulfuron, triaziflam, tribenuron-methyl, triclopyr, triclopyr-butotyl, triclopyr-triethylammonium, tridiphane, trifluralin, triflusulfuron-methyl, and vernolate.

In certain instances, combinations with other herbicides having a similar spectrum of control but a different mode of action will be particularly advantageous for preventing the development of resistant weeds. Certain combinations of compounds of this invention with other herbicides may provide synergistic herbicidal effects on weeds or may provide enhanced crop safety.

Preferred for better control of undesired vegetation in corn (e.g., lower use rate, broader spectrum of weeds controlled, or enhanced crop safety) or for preventing the development of resistant weeds in corn are mixtures of a compound of this invention with

one or more of the herbicides selected from the group rimsulfuron, nicosulfuron, thifensulfuron, prosulfuron, halosulfuron, naphthalic anhydride, flurazole, dichlormid, fenchlorazole ethyl, naphthalic anhydride, MG-191 (2-dichloromethyl)-2-methyl-1,3-dioxolane), dicyclonon, benoxacor, cyometrinil, furilazole, oxabetrinil, cloquintocet mexyl, fluxofenim, fenclorim, menfenpyr diethyl, and R-29148 (3-(dichloroacetyl)-2,2,5-trimethyloxazolidine).

Specifically preferred mixtures for use in corn are selected from the group consisting of:

a) Compound 113 (Index Table C, mixture partner A, generally applied at a rate of 10 to 1000 g/ha, preferably applied at a rate of 50 to 500 g/ha) in combination with:

Combination Number	Mixture partner B
1	rimsulfuron
2	nicosulfuron
3	dichlormid
4	benoxacor
5	naphthalic anhydride
6	rimsulfuron (B1) in combination with dichlormid (B2)
7	nicosulfuron (B3) in combination with dichlormid (B4)

Combination 1 is generally used in a ratio of A to B of 3:1 to 50:1, preferably 5:1 to 30:1, with B being applied at a rate of 1 to 100 g/ha, preferably 5 to 50 g/ha. Combination 2 is generally used in a ratio of A to B of 2:1 to 20:1, preferably 4:1 to 10:1, with B being applied at a rate of 1 to 100 g/ha, preferably 20 to 70 g/ha. Combination 3 is generally used in a ratio of A to B of 1:10 to 10:1, preferably 1:2 to 2:1, with B being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 4 is generally used in a ratio of A to B of 1:10 to 10:1, preferably 1:2 to 4:1, with B being applied at a rate of 1 to 1000 g/ha, preferably 20 to 500 g/ha. Combination 5 is generally used in a ratio of A to B of 1:500 to 50:1, preferably 1:20 to 10:1, with B being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 6 is generally used in a ratio of A to B1 of 3:1 to 50:1, preferably 5:1 to 30:1, and a ratio of A to B2 of 1:10 to 10:1, preferably 1:2 to 2:1, with B1 being applied at a rate of 1 to 100 g/ha, preferably 5 to 50 g/ha, and B2 being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 7 is generally used in a ratio of A to B3 of 2:1 to 20:1, preferably 4:1 to 10:1, and a ratio of A to B4 of 1:10 to 10:1, preferably

1:2 to 2:1, with B3 being applied at a rate of 1 to 100 g/ha, preferably 20 to 70 g/ha, and B4 being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha.

b) Compound 131 (Index Table C, mixture partner A, generally applied at a rate of 10 to 1000 g/ha, preferably applied at a rate of 50 to 500 g/ha) in combination with:

Combination Number	Mixture partner B
1	rimsulfuron
2	nicosulfuron
3	dichlormid
4	benoxacor
5	naphthalic anhydride
6	rimsulfuron (B1) in combination with dichlormid (B2)
7	nicosulfuron (B3) in combination with dichlormid (B4)

Combination 1 is generally used in a ratio of A to B of 3:1 to 50:1, preferably 5:1 to 30:1, with B being applied at a rate of 1 to 100 g/ha, preferably 5 to 50 g/ha. Combination 2 is generally used in a ratio of A to B of 2:1 to 20:1, preferably 4:1 to 10:1, with B being applied at a rate of 1 to 100 g/ha, preferably 20 to 70 g/ha. Combination 3 is generally used in a ratio of A to B of 1:10 to 10:1, preferably 1:2 to 2:1, with B being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 4 is generally used in a ratio of A to B of 1:10 to 10:1, preferably 1:2 to 4:1, with B being applied at a rate of 1 to 1000 g/ha, preferably 20 to 500 g/ha. Combination 5 is generally used in a ratio of A to B of 1:500 to 50:1, preferably 1:20 to 10:1, with B being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 6 is generally used in a ratio of A to B1 of 3:1 to 50:1, preferably 5:1 to 30:1, and a ratio of A to B2 of 1:10 to 10:1, preferably 1:2 to 2:1, with B1 being applied at a rate of 1 to 100 g/ha, preferably 5 to 50 g/ha, and B2 being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 7 is generally used in a ratio of A to B3 of 2:1 to 20:1, preferably 4:1 to 10:1, and a ratio of A to B4 of 1:10 to 10:1, preferably 1:2 to 2:1, with B3 being applied at a rate of 1 to 100 g/ha, preferably 20 to 70 g/ha, and B4 being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha.

c) Compound 242 (Index Table C, mixture partner A, generally applied at a rate of 10 to 1000 g/ha, preferably applied at a rate of 50 to 500 g/ha) in combination with:

Combination Number	Mixture partner B
1	Rimsulfuron
2	Nicosulfuron
3	Dichlormid
4	Benoxacor
5	naphthalic anhydride
6	rimsulfuron (B1) in combination with dichlormid (B2)
7	nicosulfuron (B3) in combination with dichlormid (B4)

Combination 1 is generally used in a ratio of A to B of 3:1 to 50:1, preferably 5:1 to 30:1, with B being applied at a rate of 1 to 100 g/ha, preferably 5 to 50 g/ha. Combination 2 is generally used in a ratio of A to B of 2:1 to 20:1, preferably 4:1 to 10:1, with B being applied at a rate of 1 to 100 g/ha, preferably 20 to 70 g/ha. Combination 3 is generally used in a ratio of A to B of 1:10 to 10:1, preferably 1:2 to 2:1, with B being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 4 is generally used in a ratio of A to B of 1:10 to 10:1, preferably 1:2 to 4:1, with B being applied at a rate of 1 to 1000 g/ha, preferably 20 to 500 g/ha. Combination 5 is generally used in a ratio of A to B of 1:500 to 50:1, preferably 1:20 to 10:1, with B being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 6 is generally used in a ratio of A to B1 of 3:1 to 50:1, preferably 5:1 to 30:1, and a ratio of A to B2 of 1:10 to 10:1, preferably 1:2 to 2:1, with B1 being applied at a rate of 1 to 100 g/ha, preferably 5 to 50 g/ha, and B2 being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 7 is generally used in a ratio of A to B3 of 2:1 to 20:1, preferably 4:1 to 10:1, and a ratio of A to B4 of 1:10 to 10:1, preferably 1:2 to 2:1, with B3 being applied at a rate of 1 to 100 g/ha, preferably 20 to 70 g/ha, and B4 being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha.

d) Compound 146 (Index Table C, mixture partner A, generally applied at a rate of 10 to 1000 g/ha, preferably applied at a rate of 50 to 500 g/ha) in combination with:

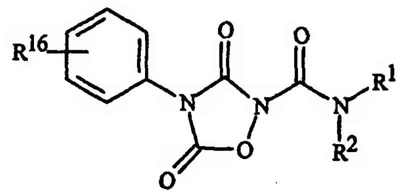
Combination Number	Mixture partner B
1	Rimsulfuron

2	Nicosulfuron
3	Dichlormid
4	Benoxacor
5	naphthalic anhydride
6	rimsulfuron (B1) in combination with dichlormid (B2)
7	nicosulfuron (B3) in combination with dichlormid (B4)

Combination 1 is generally used in a ratio of A to B of 3:1 to 50:1, preferably 5:1 to 30:1, with B being applied at a rate of 1 to 100 g/ha, preferably 5 to 50 g/ha. Combination 2 is generally used in a ratio of A to B of 2:1 to 20:1, preferably 4:1 to 10:1, with B being applied at a rate of 1 to 100 g/ha, preferably 20 to 70 g/ha. Combination 3 is generally used in a ratio of A to B of 1:10 to 10:1, preferably 1:2 to 2:1, with B being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 4 is generally used in a ratio of A to B of 1:10 to 10:1, preferably 1:2 to 4:1, with B being applied at a rate of 1 to 1000 g/ha, preferably 20 to 500 g/ha. Combination 5 is generally used in a ratio of A to B of 1:500 to 50:1, preferably 1:20 to 10:1, with B being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 6 is generally used in a ratio of A to B1 of 3:1 to 50:1, preferably 5:1 to 30:1, and a ratio of A to B2 of 1:10 to 10:1, preferably 1:2 to 2:1, with B1 being applied at a rate of 1 to 100 g/ha, preferably 5 to 50 g/ha, and B2 being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha. Combination 7 is generally used in a ratio of A to B3 of 2:1 to 20:1, preferably 4:1 to 10:1, and a ratio of A to B4 of 1:10 to 10:1, preferably 1:2 to 2:1, with B3 being applied at a rate of 1 to 100 g/ha, preferably 20 to 70 g/ha, and B4 being applied at a rate of 10 to 1000 g/ha, preferably 50 to 500 g/ha.

The following Tests demonstrate the control efficacy of the compounds of this invention against specific weeds. The weed control afforded by the compounds is not limited, however, to these species. See Index Tables A-D for compound descriptions. The abbreviation "dec" indicates that the compound appeared to decompose on melting. The abbreviation "Ex." stands for "Example" and is followed by a number indicating in which example the compound is prepared.

INDEX TABLE A



Cmpd No.	R^1	R^2	R^{16}	MP(°C)
1	Et	Et	4-OCH_3	113-116
2	Et	Et	2,6-dimethyl	90-93
3	Et	Et	4-F	71-76
4	*i*-Pr	4-F-Phenyl	2-CH_3	122-124
5	*i*-Pr	4-F-Phenyl	4-OCH_3	145-148
6	*i*-Pr	3, 6-dihydro-2*H*-pyran	4-OCH_3	98-100
7 (Ex.1)	*i*-Pr	4-F-Phenyl	2,4-di-Cl	57-60
8	*i*-Pr	4-F-Phenyl	2-Cl	80-83
9	*i*-Pr	3, 6-dihydro-2*H*-pyran	3,5-di-Cl	137-139
10	*i*-Pr	3, 6-dihydro-2*H*-pyran	2-CH_3	143-145
11	Et	Et	3,5-di-Cl	oil*
12	Et	Et	4-OCF_3	oil*
13	*i*-Pr	3, 6-dihydro-2*H*-pyran	4-OCF_3	oil*
14	*i*-Pr	4-F-Phenyl	2-OCF_3	129-131
15	*i*-Pr	4-F-Phenyl	2-CF_3	131-134
16	*i*-Pr	4-F-Phenyl	2, 5-di-Cl	120-122
17	*i*-Pr	4-F-Phenyl	1, 4-di-Me	154-156
18	*i*-Pr	4-F-Phenyl	2,6-di-Me	103-105
19	*i*-Pr	4-F-Phenyl	2,6-di-Cl	130-132
20	*i*-Pr	4-F-Phenyl	4-Cl-2-CF_3	128-131
21	*i*-Pr	4-F-Phenyl	3-Cl-2-Me	170-172
22	*i*-Pr	2,4-di-F-Phenyl	2,4-di-F	108-110
23	Et	*c*-Hex	2,4-di-F	oil*
24	*i*-Pr	2,4-di-F-Phenyl	2,4-di-Me	103-106
25	*i*-Pr	2,4-di-F-Phenyl	2-Me	85-89
26	Et	*c*-Hex	2,4-di-Me	118-120
27	Et	*c*-Hex	2,6-di-Me	120-122

28	*i*-Pr	2,4-di-F-Phenyl	2,6-di-Me	129-131
29	Et	*c*-Hex	2-OMe	111-114
30	*i*-Pr	4-F-Phenyl	2-OMe	109-111
31	*i*-Pr	2,4-di-F-Phenyl	2-OMe	55-60
32	*i*-Pr	2,4-di-F-Phenyl	2,4-di-OMe	134-137
33	*i*-Pr	4-F-Phenyl	2,4-di-OMe	175-177
34	*i*-Pr	4-F-Phenyl	2-Et	94-97
35	*i*-Pr	4-F-Phenyl	2-Me-4-OMe	112-115
36	*i*-Pr	Phenyl	2-Me	148-150
37	*c*-Pr	4-F-Phenyl	2-Me	oil*
38	*i*-Pr	4-F-Phenyl	H	oil*
39	*i*-Pr	4-CF_3-Phenyl	2-Me	85
40	*i*-Pr	4-Me-Phenyl	2-Me	128
41	*i*-Pr	4-Cl-Phenyl	2-Me	139-141
42	*i*-Pr	2,4-di-Cl-5-O-*i*-Pr-Phenyl	2-Me	68-70
43	*i*-Pr	4-F-Phenyl	2,4-di-Cl-5-O-*i*-Pr	148-150
44	*i*-Pr	4-NO_2-Phenyl	2-Me	148
45	*i*-Pr	2,4-di-F-Phenyl	2-Et	93-97
46 (Ex.2)	*i*-Pr	Phenyl	2,6-di-Me	146-148
47	*i*-Pr	4-Cl-Phenyl	2,6-di-Me	143-147
48	*i*-Pr	3,4-di-F-Phenyl	2-Me	124
49	*i*-Pr	4-OMe-Phenyl	2-Me	95
50	*c*-Pr	2,4-diF-Phenyl	2-Me	oil*
51	*i*-Pr	4-C*N*-Phenyl	2-Me	205
52	*i*-Pr	4-F-Phenyl	2-E*t*-6-Me	oil*
53	*i*-Pr	4-F-Phenyl	2-Cl-6-Me	oil*
54	*i*-Pr	4-Cl-Phenyl	2-Cl-6-Me	oil*
55	*i*-Pr	Pyrrolidinyl	2,4-di-Cl	120-122
56	*i*-Pr	Pyrrolidinyl	2-OCF_3	oil*
57	*i*-Pr	Pyrrolidinyl	2-CF_3	120-122
58	*i*-Pr	Pyrrolidinyl	2, 5-di-Cl	139-140
59	*i*-Pr	Pyrrolidinyl	2-Me	103-106
60	*i*-Pr	4-F-Phenyl	2,4, 6-tri-Me	181-183
61	*i*-Pr	4-Cl-Phenyl	2,4, 6-tri-Me	121-122

62	*i*-Pr	4-F-Phenyl	2-Me-6-OMe	100-102
63	Et	*c*-Hex	2,4, 6-tri-Me	122-123
64	*i*-Pr	4-Cl-Phenyl	2-*i*-Pr, 6-Me	oil*
65	*i*-Pr	4-F-Phenyl	2-*i*-Pr, 6-Me	oil*
66	*i*-Pr	Phenyl	2-*i*-Pr, 6-Me	oil*
67	*i*-Pr	3,5-di-F	2-Me	120
68	*i*-Pr	2, 5-di-F	2-Me	98
69	*i*-Pr	Benzyl	2,6-di-Me	oil*
70	Et	Benzyl	2,6-di-Me	oil*
71	Et	Benzyl	2-Me	oil*
72	*i*-Pr	Benzyl	2-Me	oil*
73	*i*-Pr	Phenyl	2-OMe, 6-Me	132-134
74	*i*-Pr	2,4-di-F-Phenyl	2-OMe, 6-Me	107-109

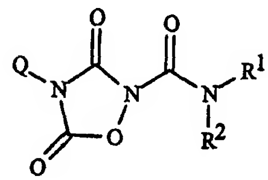
*see Index Table B for ^{1}H NMR data.

INDEX TABLE B

Cmpd No.	^{1}H NMR Data ($CDCl_3$ solution unless indicated otherwise)[a]
11	δ 1.25 (t, 6H), 3.40 (m, 4H), 6.96 (s, 1H), 7.55 (s, 1H), 8.59 (s, 1H).
12	δ 1.26 (t, 6H), 3.58 (m, 4H), 7.36 (d, 2H), 7.61 (d, 2H).
13	δ 1.33 (d, 6H) 2.3-2.4 (m, 2H), 3.86 (t, 2H), 4.2-4.3 (m, 2H), 4.38-4.45 (m, 1H), 5.83-5.90 7.38 (m, 2H), 7.60 (m, 2H).
23	δ 7.5-7.4 (m, 1H), 7.1 (t, 2H), 4.2-3.8 (m, 1H), 3.5-3.2 (m, 2H), 2.0-1.8 (m, 3H), 1.8-1.0 (m
37	δ 7.3-7.4 (m, 6H), 7.0-7.1 (t, 2H), 3.4 (m, 1H), 2.21 (s, 3H), 0.9 (m, 2H), 0.7-0.8 (m, 2H).
38	δ 7.4-7.6 (m , 4H), 7.3 (m, 1H), 7.0-7.2 (m, 2H), 4.7 (m, 1H), 1.2 (d, 6H).
50	δ 7.3-7.4 (m, 4H), 7.2 (d, 1H), 6.8-7.0 (q, 2H), 3.4 (m, 1H), 2.2 (s, 3H), 0.9 (d, 2H), 0.8 (d,
52	δ 7.2-7.4 (m, 3H), 7.0-7.2 (m, 4H), 4.7 (m, 1H), 2.3-2.4 (q, 2H), 2.1 (s, 3H), 1.2 (d, 6H), 1. (t, 3H).
53	δ 7.3 (m, 3H), 7.2 (m, 2H), 7.1 (t, 2H), 4.6-4.7 (m, 1H), 2.19 (s, 3H), 1.2 (d, 6H).
54	δ 7.3-7.4 (q, 4H), 7.2 (m, 3H), 4.6-4.7 (m, 1H), 2.198 (s, 3H), 1.2 (d, 6H).
69	δ 7.4-7.1 (m, 8H), 4.68 (s, 2H), 4.5 (bs, 1H), 2.23 (s, 6H), 1.27 (d, 6H).
70	δ 7.4-7.1 (m, 8H), 4.74 (s, 2H), 3.6-3.4 (bs, 2H), 2.26 (s, 6H), 1.2 (m, 3H).
71	δ 7.5-7.3 (m, 9H), 4.74 (m, 2H), 3.6-3.4 (bm, 2H), 2.30 (s, 3H), 1.2 (bt, 3H).
72	δ 7.5-7.1 (m, 9H), 4.67 (s, 2H), 4.5 (bs, 1H), 2.27 (s, 3H), 1.28 (d, 6H).

[a] ^{1}H NMR data are in ppm downfield from tetramethylsilane. Couplings are designated by (s)-singlet, (d)-doublet, (t)-triplet, (q)-quartet, (m)-multiplet, (dd)-doublet of doublets, (dt)-doublet of triplets, (br s)-broad singlet.

INDEX TABLE C



Cmpd.	Q	R^1	R^2	MP °C
75	1,3,5-Trimethylpyrazol-4-yl	*i*-Pr	4-F-Phenyl	152-154
76	1,3,5-Trimethylpyrazol-4-yl	*i*-Pr	2,4-diF-Phenyl	45-50
77	2-Thienylmethyl	Et	Et	oil*
78 (Ex.9)	Benzyl	*i*-Pr	4-F-Phenyl	95-96
79	Benzyl	*i*-Pr	2,4-diF-Phenyl	93-95
80	2-Thienylmethyl	*i*-Pr	4-F-Phenyl	oil*
81	2-Thienylmethyl	*i*-Pr	2-Dihydropyranyl	oil*
82	2-Thienylmethyl	Et	*c*-Hexyl	oil*
83	2-Thienylmethyl	Me	Phenyl	oil*
84	2-Methylbenzyl	Et	Et	oil*
85	2-Methylbenzyl	Me	Ph	oil*
86	2-Thienylmethyl	*i*-Pr	2,4-diF-Ph	77-80
87	2-Methylbenzyl	*i*-Pr	2,4-diF-Phenyl	oil*
88	2-Methylbenzyl	*i*-Pr	4-F-Phenyl	118-120
89	5-Tetrahydronaphthyl	Et	Et	oil*
90	5-Tetrahydronaphthyl	*i*-Pr	4-F-Phenyl	oil*
91	*n*-Propyl	*i*-Pr	4-F-Phenyl	oil*
92	*n*-Propyl	*i*-Pr	Phenyl	oil*
93	Allyl	*i*-Pr	Phenyl	68-70
94	Benzyl	*i*-Pr	Phenyl	90-94
95	1,3-Dimethyl-5-chloropyrazol-4-yl	*i*-Pr	4-F-Phenyl	109-112
96	1,3-Dimethyl-5-chloropyrazol-4-yl	*i*-Pr	2,4-diF-Phenyl	55-59
97	1-Methyl-5-chloropyrazol-4-yl	*i*-Pr	4-F-Phenyl	55-60
98	1-Methylpyrazol-4-yl	*i*-Pr	4-F-Phenyl	145-146
99	2-Trifluoromethylcyclohexyl	*i*-Pr	4-F-Phenyl	oil*
100	3-Phenyl-5-methylisoxazol-4-yl	*i*-Pr	4-F-Phenyl	206-209

101	3-Ethyl-5-methylisoxazol-4-yl	*i*-Pr	4-F-Phenyl	il*
102	3-Ethyl-5-ethylisoxazol-4-yl	*i*-Pr	4-F-Phenyl	74-77
103	2-Thienylmethyl	*i*-Pr	Phenyl	90-95
104	2-Methoxybenzyl	*i*-Pr	Phenyl	115-117
105	Allyl	*i*-Pr	4-Cl-Phenyl	oil*
106	Benzyl	*i*-Pr	4-Cl-Phenyl	oil*
107	Ethyl	*i*-Pr	4-F-Phenyl	78-81
108	Ethyl	*i*-Pr	4-Cl-Phenyl	83-86
109	Isopropyl	*i*-Pr	2,4-diF-Phenyl	82-85
110	*c*-Hexyl	*i*-Pr	4-F-Phenyl	128-131
111	*c*-Hexyl	*i*-Pr	4-Cl-Phenyl	126-130
112	*c*-Hexyl	*i*-Pr	Phenyl	136-139
113 (Ex.14)	Isopropyl	*i*-Pr	Phenyl	82-86
114	Isopropyl	*i*-Pr	4-Cl-Phenyl	76-80
115	*c*-Hexyl	*i*-Pr	2,4-diF-Phenyl	88-90
116	Ethyl	*i*-Pr	2,4-diF-Phenyl	75-77
117	Ethyl	*i*-Pr	Phenyl	74-76
118	*t*-Bu	*i*-Pr	4-Cl-Phenyl	88-90
119	*n*-Pr	*i*-Pr	4-Cl-Phenyl	oil*
120	1,3,5-Trimethylpyrazol-4-yl	*i*-Pr	Phenyl	48-52
121	1,3-Dimethyl-5-chloropyrazol-4-yl	*i*-Pr	Phenyl	54-56
122	1-Methyl-5-chloropyrazol-4-yl	*i*-Pr	Phenyl	94-97
123	1-Methylpyrazol-4-yl	*i*-Pr	Phenyl	111-112
124	1-Methylpyrazol-5-yl	*i*-Pr	4-F-Phenyl	52-59
125	1, 4-Dimethylpyrazol-5-yl	*i*-Pr	4-F-Phenyl	45-49
126	3,5-di-Me-isoxazol-4-yl	*i*-Pr	2-Dihydropyranyl	oil*
127	Allyl	*c*-Pr	2,4-F-Phenyl	oil*
128	CH_2CO_2Et	*i*-Pr	4-F-Phenyl	oil*
129	*t*-Bu	*i*-Pr	Phenyl	oil*
130	*n*-Pr	*i*-Pr	2,4-diF-Phenyl	oil*
131 (Ex.13)	*i*-Pr	*i*-Pr	4-F-Phenyl	78-80
132	*i*-Pr	*i*-Pr	4-Me-Phenyl	68-71
133	α-Me-Benzyl	*i*-Pr	4-Cl-Phenyl	oil*

134	α-Me-Benzyl	*i*-Pr	4-F-Phenyl	oil*
135	3,5-Diisopropylisoxazol-4-yl	*i*-Pr	4-F-Phenyl	oil*
136 (Ex.5)	2-Methylbenzyl	*i*-Pr	4-Cl-Phenyl	oil*
137 (Ex.7)	Methyl	*i*-Pr	4-Cl-Phenyl	121-123
138 (Ex.6)	Methyl	*i*-Pr	4-F-Phenyl	135-136
139	2-Methylallyl	*i*-Pr	4-F-Phenyl	oil*
140	2-Chlorobenzyl	*i*-Pr	4-F-Phenyl	oil*
141	2-Chlorobenzyl	*i*-Pr	Pyrrolidinyl	oil*
142	2-Methoxybenzyl	*i*-Pr	Pyrrolidinyl	oil*
143	2-Methoxybenzyl	*i*-Pr	4-F-Phenyl	104-106
144	2-Chlorobenzyl	*i*-Pr	2-Dihydropyranyl	oil*
145	2-Chlorobenzyl	*i*-Pr	*c*-Hexenyl	oil*
146 (Ex.3)	Allyl	*i*-Pr	4-F-Phenyl	65-66
147	Allyl	*i*-Pr	2-Dihydropyranyl	oil*
148	2-Chloroethyl	*i*-Pr	4-F-Phenyl	oil*
149	2-Chloroethyl	*i*-Pr	2-Dihydropyranyl	oil*
150	Allyl	Et	Pyrrolidinyl	oil*
151	Allyl	*i*-Pr	2,4-diF-Phenyl	oil*
152	Benzyl	Et	Et	oil*
153	Benzyl	Me	Phenyl	oil*
154	Allyl	*c*-Pr	4-F-Phenyl	oil*
155	3,5-Dimethylisoxazol-4-yl	*i*-Pr	4-F-Phenyl	133-136
156	3,5-Dimethylisoxazol-4-yl	*i*-Pr	2,4-diF-Phenyl	175-178
157	3,5-Dimethylisothiazol-4-yl	*i*-Pr	4-F-Phenyl	oil*
158	3,5-Dimethylisothiazol-4-yl	*i*-Pr	2,4-di-F-Phenyl	158-161
159	3,5-Dimethylisothiazol-4-yl	*i*-Pr	4-Cl-Phenyl	124-127
160	2, 5-Dichlorothiazoly-4-yl	*i*-Pr	4-F-Phenyl	oil*
161	2-Me-*c*-Hex	*i*-Pr	4-F-Phenyl	78-81
162	2-Me-*c*-Hex	*i*-Pr	Phenyl	oil*
163	CF_3CH_2	*i*-Pr	4-F-Phenyl	122-124
164	H	*i*-Pr	4-F-Phenyl	55-60
165	*i*-Pr	*i*-Pr	Benzyl	oil*
166	*i*-Pr	Et	Benzyl	oil*
167	α-Me-Benzyl (S)	*i*-Pr	4-F-Phenyl	oil*

168	α-Me-Benzyl (S)	*i*-Pr	Phenyl	oil*
169 (Ex.8)	*i*-Bu	*i*-Pr	4-F-Phenyl	80-81
170 (Ex.4)	NMe2	*i*-Pr	4-F-Phenyl	69-71
171	2-Methylphenyl	*i*-Pr	2, 3-DiF-Phenyl	88
172	2-Methyl-*c*-hexyl	*i*-Pr	2,4-DiF-Phenyl	oil*
173	α-Methylbenzyl (S)	*i*-Pr	Phenyl	72-74
174	α-Methylbenzyl (S)	*i*-Pr	4-Cl-Phenyl	oil*
175	2-Methylphenyl	*i*-Pr	4-Br-Phenyl	117
176	2-Methylphenyl	*i*-Pr	2,6-di-F-Phenyl	91
177	Phenyl (Me)N	*i*-Pr	4-F-Phenyl	62-64
178	α-Methylbenzyl (R)	*i*-Pr	4-Cl-Phenyl	oil*
179	α-Methylbenzyl (R)	*i*-Pr	4-F-Phenyl	64-67
180	2,6-DiMe-Phenyl	*i*-Pr	4, 6-Dimethoxy-1,3,5-Triazine-2-yl	oil*
181	2-Me-Phenyl	*i*-Pr	4, 6-Dimethoxy-1,3,5-Triazine-2-yl	oil*
182	*i*-Propyl	*i*-Pr	4, 6-Dimethoxy-1,3,5-Triazine-2-yl	oil*
183	Phenyl (Me)N	Et	*c*-Hexyl	oil*
184	3-Trifluoromethylcyclohexyl	*i*-Pr	4-F-Phenyl	oil*
185	2-Methylphenyl	*i*-Pr	2,4-DiCl-Phenyl	54
186	2-Methylphenyl	*i*-Pr	2-Cl, 4-F-Phenyl	48-51
187	2-Methylphenyl	*i*-Pr	4-Ph-Phenyl	63
188	Oxiranylmethyl	*i*-Pr	4-F-Phenyl	oil*
189	*i*-Propyl	Et	4-Pyridylmethyl	oil*
190	*i*-Propyl	Et	1,3,4-Thiadiazol-2-yl	oil*
191	(2,4-Dimethylthiazol-5-yl)methyl	*i*-Pr	4-Cl-Phenyl	oil*
192	(2,4-Dimethylthiazol-5-yl)methyl	*i*-Pr	4-F-Phenyl	oil*
193	2-Methylphenyl	3-Pentyl	4-F-Phenyl	142-145
194	Allyl	*c*-Bu	4-F-Phenyl	61-63
195	2-Methylphenyl	*i*-Pr	4-Cl, 2-F-Phenyl	50
196	2,4-Dimethylthiazol-5-yl	*i*-Pr	4-Cl-Phenyl	oil*
197	2,4-Dimethylthiazol-5-yl	*i*-Pr	Phenyl	oil*

198	2,4-Dimethylthiazol-5-yl	*i*-Pr	4-F-Phenyl	oil*
199	1-(3-Methyl-3-Butenyl)	*i*-Pr	4-F-Phenyl	77-78
200	2-Methylphenyl	*c*-Bu	4-F-Phenyl	108-110
201	2-Et-6-Me-Phenyl	*i*-Pr	4-F-Phenyl	oil*
202	4-Trifluoromethoxyphenyl	*i*-Pr	4-F-Phenyl	88-92
203	2-Methylphenyl	*i*-Pr	4-Methylsulfonylphenyl	153
204	2-Methylphenyl	*i*-Pr	2-F-Phenyl	42
205	2-Methylphenyl	*i*-Pr	4-Methylthiophenyl	104
206	2-Furanylmethyl	*i*-Pr	4-Cl-Phenyl	oil*
207	2-Furanylmethyl	*i*-Pr	4-F-Phenyl	oil*
208	2-Furanylmethyl	*i*-Pr	2,4-diF-Phenyl	oil*
209	2-Furanylmethyl	*i*-Pr	Phenyl	67-70
210	Cinnamyl	*i*-Pr	4-F-Phenyl	oil*
211	4-Acetoxybutyl	*i*-Pr	4-F-Phenyl	93-95
212	Propargyl	*i*-Pr	4-F-Phenyl	74-75
213	3-Trimethylsilylpropargyl	*i*-Pr	4-F-Phenyl	oil*
214	1-(3-Ethoxycarbonyl-2-Propenyl)	*i*-Pr	4-F-Phenyl	oil*
215	MeO_2CCH_2	*i*-Pr	4-F-Phenyl	oil*
216	$t\text{-}BuCOCH_2$	*i*-Pr	4-F-Phenyl	oil*
217	$MeCOCH_2$	*i*-Pr	4-F-Phenyl	oil*
218	1-(3,4,4-Trifluoro-3-Butenyl)	*i*-Pr	4-F-Phenyl	oil*
219	2-(1,3-Dioxolan-2-yl)ethyl	*i*-Pr	4-F-Phenyl	94-96
220	$CH_3OCH_2CH_2OCH_2$	*i*-Pr	4-F-Phenyl	oil*
221	*n*-Butyl	*i*-Pr	4-F-Phenyl	oil*
222	2,4-DiMe-6-OMe-Phenyl	*i*-Pr	4-F-Phenyl	oil*
223	2,4-DiMe-6-OMe-Phenyl	*i*-Pr	2,4-diF-Phenyl	oil*
224	2-Br-4, 6-diMe-Phenyl	*i*-Pr	4-F-Phenyl	141-144
225	Me_2N	*i*-Pr	Phenyl	oil*
226	3-Methyl-3-oxetanylmethyl	*i*-Pr	4-F-Phenyl	65-77
227	1-(3,3,3-Trifluoro-2-methoximino)propyl	*i*-Pr	4-F-Phenyl	80-105
228	Methyl	Et	*c*-Hex	65-74
229	2-Methylphenyl	*i*-Pr	4-*n*-Bu-Phenyl	oil*
230	2-Methylphenyl	*i*-Pr	4-Et-Phenyl	oil*

231	2-Methylphenyl	*i*-Pr	4-*i*-Pr-Phenyl	94
232	(2,4-DiMe-Thiazol-5-yl)methyl	*i*-Pr	4-F-Phenyl	oil*
233	(2,4-DiMe-Thiazol-5-yl)methyl	*i*-Pr	2,4-diF-Phenyl	oil*
234	3-Pyridyl	*i*-Pr	4-F-Phenyl	109-112
235	3-Pyridyl	*i*-Pr	Phenyl	116-118
236	2-Methylphenyl	*i*-Pr	2-Me-Phenyl	oil*
237	2-Methylphenyl	*i*-Pr	4-Dimethylamino-Phenyl	115
238	α-Me-Benzyl (R)	*i*-Pr	2,4-diF-Phenyl	oil*
239	2-Methylphenyl	*s*-Bu	4-F-Phenyl	79-82
240	2-Methylphenyl	1-*c*-Pr-ethyl	4-F-Phenyl	90-93
241	*c*-Propyl	*i*-Pr	4-Cl-Phenyl	oil*
242	*c*-Propyl	*i*-Pr	4-F-Phenyl	65-67
243	*c*-Propyl	*i*-Pr	Phenyl	70-74
244	2,6-DiMe-Phenyl	1-Ethoxy carbonylethyl	4-F-Phenyl	97-99
245	D_3C	*i*-Pr	4-F-Phenyl	141-143
246	Neopentyl	*i*-Pr	4-F-Phenyl	106-108
247	2-Methylphenyl	1-Ethoxy carbonylethyl	4-F-Phenyl	97-99
248	Ethyl	1-Ethoxy carbonylethyl	4-F-Phenyl	oil*
249	Allyl	*c*-Heptyl	4-F-Phenyl	72-79
250	2-Phenethyl	*i*-Pr	4-F-Phenyl	95-96
251	*c*-Propylmethyl	*i*-Pr	4-F-Phenyl	oil*
252	$CH_3CH_2C(O)CH_2$	*i*-Pr	4-F-Phenyl	oil*
253	*n*-$C_{19}H_{39}$	*i*-Pr	4-F-Phenyl	oil*
254	1-(2-Octynyl)	*i*-Pr	4-F-Phenyl	oil*
255	2-(1,3-Dioxa*n*-2-yl)ethyl	*i*-Pr	4-F-Phenyl	82-83
256	1-(2-Trimethylsilylmethyl-2-propenyl)	*i*-Pr	4-F-Phenyl	oil*
257	2-Cyclohexylethyl	*i*-Pr	4-F-Phenyl	oil*
258	$CH_3OCH_2CH_2OCH_2$	*i*-Pr	4-F-Phenyl	119-120
259	(3,5-dimethylisoxazol-4-yl)methyl	*i*-Pr	4-F-Phenyl	oil*
260	PhC(O)CH(Me)	*i*-Pr	4-F-Phenyl	oil*

261	$PhCH_2OCH_2$	*i*-Pr	4-F-Phenyl	110-112
262	Geranyl	*i*-Pr	4-F-Phenyl	oil*
263	1-(3-Methoxycarbonyl-2-Propenyl)	*i*-Pr	4-F-Phenyl	oil*
264	$Et_2NC(O)CH_2$	*i*-Pr	4-F-Phenyl	oil*
265	$t\text{-}BuO_2CCH_2$	*i*-Pr	4-F-Phenyl	oil*
266	$MeO_2CCH_2CH_2CH_2$	*i*-Pr	4-F-Phenyl	oil*
267	2-Pyridylmethyl	*i*-Pr	4-F-Phenyl	oil*
268	2-Methylphenyl	*i*-Pr	4-Phenoxy-Phenyl	51
269	2-Methylphenyl	*i*-Pr	3-F-Phenyl	128
270	2-Methylphenyl	*i*-Pr	4-t-Bu-Phenyl	oil*
271	*c*-Pentyl	*i*-Pr	4-F-Phenyl	79-80
272	3-Thienyl	*i*-Pr	4-F-Phenyl	125-128
273	2,6-DiMe-Phenyl	*i*-Pr	2-Cyclohexenyl	105-112
274	Me_2N	Et	*c*-Hex	oil*
275	Neopentyl	Et	*c*-Hex	oil*
276	Neopentyl	*i*-Pr	Phenyl	116-118
277	Neopentyl	*i*-Pr	2,4-DiF-Phenyl	oil*
278	2-Methylphenyl	*i*-Pr	5-Indanyl	115
279	Allyl	1-Ethoxy carbonylethyl	4-F-Phenyl	oil*
280	*c*-Hexyl	1-Ethoxy carbonylethyl	4-F-Phenyl	oil*
281	2, 3-Dihydro-2-Me-benzofuran-7-yl	*i*-Pr	4-F-Phenyl	148-150
282	*c*-Pentyl	*i*-Pr	4-Cl-Phenyl	104-106
283	*c*-Pentyl	*i*-Pr	Phenyl	oil*
284	*c*-Pentyl	*i*-Pr	2,4-DiF-Phenyl	oil*
285	1-(3-Chlorobutenyl)	*i*-Pr	4-F-Phenyl	oil*
286	1-(2-Pentenyl)	*i*-Pr	4-F-Phenyl	oil*
287	3-Fluoropropyl	*i*-Pr	4-F-Phenyl	oil*
288	1-(3-Methyl-2-butenyl)	*i*-Pr	4-F-Phenyl	oil*
289	1-(4-Fluorobutyl)	*i*-Pr	4-F-Phenyl	oil*
290	*n*-Pentyl	*i*-Pr	4-F-Phenyl	oil*
291	1-(4-Pentenyl)	*i*-Pr	4-F-Phenyl	oil*

292	Acetoxymethyl	*i*-Pr	4-F-Phenyl	il*
293 (Ex.15)	Methoxymethyl	*i*-Pr	4-F-Phenyl	oil*
294	Trimethylsilylmethyl	*i*-Pr	4-F-Phenyl	oil*
295	Ethoxymethyl	*i*-Pr	4-F-Phenyl	oil*
296	*i*-Propyl	*i*-Pr	2-Pyrazinyl	oil*
297	*c*-Propyl	Et	Et	oil*
298	*c*-Propyl	Et	*c*-Hex	oil*
299	*c*-Propyl	*i*-Pr	2,4-DiF-Phenyl	83-85
300	2-Methylphenyl	*i*-Pr	4-CF_3O-Phenyl	109
301	2-Methylphenyl	*i*-Pr	4-Pyridinyl	152-154
302	*i*-Propyl	1-Ethoxy carbonylethyl	4-F-Phenyl	oil*
303	2-t-Bu-6-Me-Phenyl	*i*-Pr	Phenyl	oil*
304	2,6-DiEt-Phenyl	*i*-Pr	4-F-Phenyl	oil*
305	2,6-DiEt-Phenyl	*i*-Pr	Phenyl	77-83
306	2-Methylphenyl	*i*-Pr	2-Naphthyl	49
307	Allyl	Et	*c*-Hex	62-65
308	*c*-Hexyl	Et	*c*-Hex	oil*
309	*i*-Propyl	Et	*c*-Hex	oil*
310	4-Tetrahydropyranyl	*i*-Pr	4-F-Phenyl	101-103
311	2-Tetrahydropyranyl	*i*-Pr	4-F-Phenyl	103-105
312	2-Furanylmethyl	Et	*c*-Hex	oil*
313	2-Biphenylylmethyl	*i*-Pr	4-F-Phenyl	113-126
314	1-(2-Methylthioethyl)	*i*-Pr	4-F-Phenyl	101-106
315	2,6-DiMe-Phenyl	*i*-Pr	2-Dihydropyranyl	122-124
316	2-(3-Methylbutyl)	*i*-Pr	4-F-Phenyl	62-64
317	1-(2,2-Dimethoxyethyl)	*i*-Pr	4-F-Phenyl	oil*
318	2,6-DiMe-Phenyl	*c*-Bu	2,4-DiCl-Phenyl	127-131
319	*i*-Propyl	*c*-Bu	2,4-DiCl-Phenyl	103-106
320	(5-Cl-1,2,3-thiadiazol-4-yl)methyl	*i*-Pr	2,4-DiF-Phenyl	103-108
321	(5-Cl-1,2,3-thiadiazol-4-yl)methyl	*i*-Pr	Phenyl	128-131
322	Cyclopentylmethyl	*i*-Pr	4-F-Phenyl	83-90
323	1-(3-Dimethylaminopropyl)	*i*-Pr	4-F-Phenyl	oil*

324	2-Methylphenyl	2-(3-OMe-propyl)	4-F-Phenyl	115-121
325	Allyl	1-*c*-Pr-ethyl	4-Cl-Phenyl	oil*
326	[2.2.1]-Bicyclohept-2-yl	*i*-Pr	2,4-DiF-Phenyl	103-105
327	[2.2.1]-Bicyclohept-2-yl	*i*-Pr	4-F-Phenyl	90-94
328	[2.2.1]-Bicyclohept-2-yl	*i*-Pr	Phenyl	90-91
329	2-Naphthyl	*i*-Pr	4-F-Phenyl	150-151
330	2-Methylphenyl	1-*c*-Pr-ethyl	4-Cl-Phenyl	111-115
331	2-MeO-6-Me-Phenyl	1-Ethoxy carbonylethyl	4-F-Phenyl	oil*
332	2-Naphthyl	*i*-Pr	Phenyl	134-135
333	2-Naphthyl	*i*-Pr	4-Cl-Phenyl	142-143
334	2-Naphthyl	*i*-Pr	4-Me-Phenyl	172-173
335	2-Naphthyl	*i*-Pr	2,4-DiF-Phenyl	oil*
336	1-Me-2-Naphthyl	*i*-Pr	4-Cl-Phenyl	oil*
337	1-Me-2-Naphthyl	*i*-Pr	2,4-DiF-Phenyl	oil*
338	1-Me-2-Naphthyl	*i*-Pr	4-F-Phenyl	oil*
339	*c*-Heptyl	*i*-Pr	4-Cl-Phenyl	125-135
340	*c*-Heptyl	*i*-Pr	4-F-Phenyl	104-105
341	*c*-Heptyl	*i*-Pr	Phenyl	100-102
342	*c*-Heptyl	*i*-Pr	2,4-DiF-Phenyl	87-90
343	2-Tetrahydrofuranylmethyl	*i*-Pr	4-F-Phenyl	95-96
344	1-Me-2-Naphthyl	*i*-Pr	Phenyl	oil*
345	2-Tetrahydrofuranyl	*i*-Pr	4-F-Phenyl	oil*
346	(3,5-Dimethylpyrazol-1-yl)methyl	*i*-Pr	Phenyl	138-148
347	(3,5-Dimethylpyrazol-1-yl)methyl	*i*-Pr	4-F-Phenyl	140-144
348	*c*-Butyl	*i*-Pr	Phenyl	70-72
349	*c*-Butyl	*i*-Pr	4-Cl-Phenyl	64-68
350	*c*-Butyl	*i*-Pr	4-F-Phenyl	97-100
351	*c*-Butyl	*i*-Pr	2,4-diF-Phenyl	65-67
352	$MeOCH_2CH(Me)$	*i*-Pr	2,4-diF-Phenyl	oil*
353	3-Pentyl	*i*-Pr	2,4-diF-Phenyl	72-75
354	3-Pentyl	*i*-Pr	Phenyl	oil*
355	2-(3-Methylbutyl)	*i*-Pr	Phenyl	oil*

356	2-(3-Methylbutyl)	*i*-Pr	2,4-diF-Phenyl	il*
357	$MeOCH_2CH(Me)$	*i*-Pr	2,4-diF-Phenyl	81-85
358	3-Pentyl	*i*-Pr	4-F-Phenyl	oil*
359	2-t-Bu-6-Me-Phenyl	*i*-Pr	4-F-Phenyl	oil*
360	1-(1-Me-*c*-propyl)	*i*-Pr	Phenyl	82-83
361	1-(1-Me-*c*-propyl)	*i*-Pr	4-Cl-Phenyl	oil*
362	1-(1-Me-*c*-propyl)	*i*-Pr	4-F-Phenyl	oil*
363	1-(1-Me-*c*-propyl)	*i*-Pr	2,4-diF-Phenyl	oil*
364	2-Methylphenyl	Et	Et	oil*
365	Methyl	1-Ethoxy carbonylethyl	4-F-Phenyl	oil*
366	3-Pyridylmethyl	*i*-Pr	4-F-Phenyl	oil*
367	2-(3-Chloropropyl)	*i*-Pr	4-F-Phenyl	oil*
368	Methyl	*i*-Pr	2,4-diF-Phenyl	oil*
369	1-(2-Me-*c*-propyl)	*i*-Pr	4-Cl-Phenyl	oil*
370	1-(2-Me-*c*-propyl)	*i*-Pr	Phenyl	oil*
371	1-(2-Me-*c*-propyl)	*i*-Pr	4-F-Phenyl	95-97
372	1-(2-Me-*c*-propyl)	*i*-Pr	2,4-diF-Phenyl	oil*
373	(5-Cl-3-Me-isothiazol-4-yl)methyl	*i*-Pr	4-F-Phenyl	126-129
374	(5-Cl-3-Me-isothiazol-4-yl)methyl	*i*-Pr	Phenyl	133-136
375	3-Tetrahydrofurylmethyl	*i*-Pr	4-F-Phenyl	84-86
376	Chloromethyl	*i*-Pr	4-F-Phenyl	83-86
377	H	*i*-Pr	4-Cl-Phenyl	137-138
378	(4-Methyl-1,2,3-thiadiazol-5-yl)methyl	*i*-Pr	Phenyl	109-113
379	(2-Ethoxy-4-CF_3-thiazol-5-yl)methyl	*i*-Pr	Phenyl	oil*
380	(4-Methyl-1,2,3-thiadiazol-5-yl)methyl	*i*-Pr	4-F-Phenyl	54-55
381	(2-Ethoxy-4-CF_3-thiazol-5-yl)methyl	*i*-Pr	4-F-Phenyl	oil*
382	1-(2,6-Dimethylpiperidine)	*i*-Pr	4-F-Phenyl	97-100
383	1-(2,6-Dimethylpiperidine)	*i*-Pr	2,4-diF-Phenyl	81-84

384	4-(Morph lino)	*i*-Pr	2,4-diF-Phenyl	62-68
385	4-(Morpholino)	*i*-Pr	4-F-Phenyl	173-175
386	H	*i*-Pr	Phenyl	116-117
387	2-(2-Cyanoethyl)	*i*-Pr	4-F-Phenyl	oil*
388	1-(2-Cyanoethyl)	*i*-Pr	4-F-Phenyl	125-128
389	*n*-Hexyl	*i*-Pr	4-F-Phenyl	oil*
390	2-(1,3-Difluoropropyl)	*i*-Pr	4-F-Phenyl	99-101
391	H	*i*-Pr	2,4-diF-Phenyl	110-112
392	Trans-1-(2-Me-*c*-propyl)	*i*-Pr	4-F-Phenyl	90-91
393	1-(1-Chloroethyl)	*i*-Pr	4-F-Phenyl	70-73
394	*i*-Butyl	*i*-Pr	2,4-diF-Phenyl	oil*
395	Cyanomethyl	*i*-Pr	4-F-Phenyl	120-123
396	1-(2-Ethoxy-3-ethoxycarbonyl-2-propenyl)	*i*-Pr	4-F-Phenyl	112-114
397	1-(3,3,3-trifluoropropyl)	*i*-Pr	4-F-Phenyl	99-100
398	1-(4,4,4-trifluorobutyl)	*i*-Pr	4-F-Phenyl	71-72
399	1-(3,4,4, 4-Tetrafluoro-3-trifluoromethylbutyl)	*i*-Pr	4-F-Phenyl	oil*
400	$CH_3C(O)CH(CH_3)$	*i*-Pr	4-F-Phenyl	oil*
401	1-(2-Cl-4-Me-thiazol-5-yl)ethyl	*i*-Pr	4-F-Phenyl	oil*
402	2-Methyl-*c*-propylmethyl	*i*-Pr	4-F-Phenyl	81-83
403	*c*-Butylmethyl	*i*-Pr	4-F-Phenyl	74-76
404	1-(*c*-Propylethyl)	*i*-Pr	4-F-Phenyl	97-99
405	1-(2-Cl-4-Me-thiazol-5-yl)ethyl	*i*-Pr	2,4-diF-Phenyl	122-125
406	1-(2-Cl-4-Me-thiazol-5-yl)ethyl	*i*-Pr	4-Cl-Phenyl	128-131
407	1-(2-Cl-4-Me-thiazol-5-yl)ethyl	*i*-Pr	Phenyl	128-131
408	2-(3-Chloropropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
409	Methyl	*i*-Pr	Phenyl	105-114
410	*i*-Butyl	*i*-Pr	Phenyl	55-67
411	2-(3-Chloropropyl)	*i*-Pr	Phenyl	95-105
412	1-(2-Butenyl)	*i*-Pr	4-F-Phenyl	oil*
413	2-(3-Butenyl)	*i*-Pr	4-F-Phenyl	oil*
414	Allyldimethylsilylmethyl	*i*-Pr	4-Cl-Phenyl	oil*
415	1-(2-Bromoethyl)	*i*-Pr	Phenyl	90-92
416	4-Tetrahydropyranyl	*i*-Pr	Phenyl	80-93

417	*i*-Butyl	*i*-Pr	4-Cl-Phenyl	oil*
418	1-(3-Methyl-3-Butenyl)	*i*-Pr	Phenyl	oil*
419	1-(2-Methylthioethyl)	*i*-Pr	Phenyl	oil*
420	(3-Methyl-3-oxetanyl)methyl	*i*-Pr	Phenyl	oil*
421	2-(1,3-difluoropropyl)	*i*-Pr	Phenyl	95-107
422	Chloromethyl	*i*-Pr	4-Cl-Phenyl	75-77
423	Chloromethyl	*i*-Pr	Phenyl	75-77
424	Phenyldimethylsilylmethyl	*i*-Pr	4-Cl-Phenyl	oil*
425	Vinyldimethylsilylmethyl	*i*-Pr	4-Cl-Phenyl	oil*
426	Allyldimethylsilylmethyl	*i*-Pr	4-F-Phenyl	oil*
427	*c*-Heptyl	*i*-Pr	3, 6-dihydro-2H-pyran	oil*
428	*c*-Heptyl	*i*-Pr	1-Cyclohexenyl	oil*
429	*c*-Heptyl	Et	*c*-Hexyl	oil*
430	(5,6-Dihydro-1,2-Oxazin-3-yl)methyl	*i*-Pr	Phenyl	95-97
431	Cyanomethyl	*i*-Pr	2,4-diF-Phenyl	123-126
432	1-(1-Cyanoethyl)	*i*-Pr	2,4-diF-Phenyl	oil*
433	1-(2-Cyanoethyl)	*i*-Pr	2,4-diF-Phenyl	112-114
434	Cyanomethyl	*i*-Pr	Phenyl	90-91
435	1-(1-Cyanoethyl)	*i*-Pr	Phenyl	oil*
436	1-(2-Cyanoethyl)	*i*-Pr	Phenyl	74-77
437	Chloromethyl	*i*-Pr	2,4-diF-Phenyl	69-71
438	1-(1-Chloroethyl)	*i*-Pr	Phenyl	73-75
439	1-(1-Methoxyethyl)	*i*-Pr	4-F-Phenyl	77-79
440	$Me_2NC(O)CH_2$	*i*-Pr	2,4-diF-Phenyl	111
441	1-(1-Methoxyethyl)	*i*-Pr	Phenyl	oil*
442	1-(2,4-Dimethylthiazol-5-yl)ethyl	*i*-Pr	Phenyl	oil*
443	1-(2,4-Dimethylthiazol-5-yl)ethyl	*i*-Pr	2,4-diF-Phenyl	oil*
444	1-(2-Cyanoethyl)	*i*-Pr	4-Cl-Phenyl	139-142
445	$PhCONHCH_2$	*i*-Pr	4-F-Phenyl	161-163
446	1-(1,2-Dimethoxyethyl)	*i*-Pr	4-F-Phenyl	oil*
447	$(EtO)_2P(O)CH_2$	*i*-Pr	Phenyl	il*
448	$(EtO)_2P(O)CH(CH_3)$	*i*-Pr	Phenyl	oil*

449	1-(2-Ethyl-4-methylthiazol-5-yl)ethyl	*i*-Pr	4-F-Phenyl	106-109
450	(5,6-Dihydro-1,2-Oxaz*in*-3-yl)methyl	*i*-Pr	4-Cl-Phenyl	105-108
451	1-(1-Cyanoethyl)	*i*-Pr	4-Cl-Phenyl	117-127
452	1-(1-Methoxy-2-propenyl)	*i*-Pr	4-F-Phenyl	oil*
453	1-(2-Methylsulfonylethyl)	*i*-Pr	4-F-Phenyl	oil*
454	1-(2-Pentenyl)	*i*-Pr	Phenyl	oil*
455	3-(4-Pentenyl)	*i*-Pr	Phenyl	oil*
456	2-(3-Chloropropyl)	*i*-Pr	4-Cl-Phenyl	oil*
457	Hydroxymethyl	*i*-Pr	4-Cl-Phenyl	oil*
458	1-(2-Chloro-1-methoxyethyl)	*i*-Pr	4-Cl-Phenyl	oil*
459	Ethyldimethylsilylmethyl	*i*-Pr	4-F-Phenyl	54-55
460	Ethyldimethylsilylmethyl	*i*-Pr	4-Cl-Phenyl	68-71
461	1-(3-Trimethylsilylpropyl)	*i*-Pr	4-F-Phenyl	oil*
462	t-BuC(O)OCH$_2$	*i*-Pr	4-F-Phenyl	87-90
463	CH$_3$O$_2$CCH(CH$_3$)	*i*-Pr	2,4-diF-Phenyl	oil*
464	CH$_3$O$_2$CCH(CH$_3$)	*i*-Pr	Phenyl	oil*
465	EtO$_2$CCH$_2$CH(CO$_2$Et)	*i*-Pr	2,4-diF-Phenyl	oil*
466	(3,4-Dihydroisoxazol-3-yl)methyl	*i*-Pr	4-F-Phenyl	93-95
467	Me$_3$SiCH$_2$CH$_2$OCH$_2$	*i*-Pr	4-Cl-Phenyl	oil*
468	2-(1,3-Difluoropropyl)	*i*-Pr	4-Cl-Phenyl	93-96
469	1-(2-Chloroethyl)	*i*-Pr	Phenyl	80-83
470	Hydroxymethyl	*i*-Pr	4-F-Phenyl	89-95
471	2-(3, 3-Dimethoxypropyl)	*i*-Pr	4-F-Phenyl	60-63
472	2-(3, 3-Dimethoxypropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
473	MeCONHCH$_2$	*i*-Pr	4-F-Phenyl	150-168
474	1-(2-Chloroethyl)	*i*-Pr	4-Cl-Phenyl	100-101
475	1-(2-Chloroethyl)	*i*-Pr	2,4-diF-Phenyl	70-72
476	Cyanomethyl	*i*-Pr	4-Cl-Phenyl	173-179
477	Me$_2$NC(O)CH$_2$	*i*-Pr	4-Cl-Phenyl	152-153
478	Me$_2$NC(O)CH(CH$_3$)	*i*-Pr	4-F-Phenyl	oil*
479	Me$_2$NC(O)CH(CH$_3$)	*i*-Pr	Phenyl	oil*
480	Me$_2$NC(O)CH(CH$_3$)	*i*-Pr	4-Cl-Phenyl	102

481	$Me_2NC(O)CH(CH_3)$	*i*-Pr	2,4-diF-Phenyl	oil*
482	(2-Chlorothiazol-5-yl)methyl	*i*-Pr	4-F-Phenyl	69-70
483	1-(2-nitroethyl)	*i*-Pr	4-Cl-Phenyl	119-122
484	*i*-PrC(CO)CH_2	*i*-Pr	4-F-Phenyl	79-81
485	*i*-PrC(CO)CH_2	*i*-Pr	Phenyl	oil*
486	*i*-PrC(CO)CH_2	*i*-Pr	2,4-diF-Phenyl	oil*
487	*i*-PrC(CO)CH_2	*i*-Pr	4-Cl-Phenyl	oil*
488	*c*-PrC(CO)CH_2	*i*-Pr	4-F-Phenyl	oil*
489	*c*-PrC(CO)CH_2	*i*-Pr	Phenyl	87-89
490	*c*-PrC(CO)CH_2	*i*-Pr	2,4-diF-Phenyl	oil*
491	HC(O)CH_2	*i*-Pr	4-F-Phenyl	oil*
492	$ClCH_2C(O)NHCH_2CH_2$	*i*-Pr	Phenyl	oil*
493	$ClCH_2C(O)NHCH_2CH_2CH_2$	*i*-Pr	Phenyl	oil*
494	(5,6-Dihydro-1,3-oxazin-2-yl)methyl	*i*-Pr	Phenyl	oil*
495	(3,4-Dihydrooxazol-2-yl)methyl	*i*-Pr	Phenyl	oil*
496	(1-Cyclohexenyl)methyl	*i*-Pr	Phenyl	oil*
497	(1-Methyl-1,2,5,6-tetrahydropyridin-3-yl)methyl	*i*-Pr	Phenyl	oil*
498	1-(2-(3-Pyridyl)-2-propenyl)	*i*-Pr	Phenyl	oil*
499	1-(2-Ethyl-4-methylthiazol-5-yl)ethyl	*i*-Pr	4-Cl-Phenyl	103-104
500	1-(3-Fluoropropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
501	2-(1,3-Dioxol*an*-2-yl)ethyl	*i*-Pr	2,4-diF-Phenyl	oil*
502	2-(1,3-Diox*an*-2-yl)ethyl	*i*-Pr	2,4-diF-Phenyl	oil*
503	Methoxymethyl	*i*-Pr	2,4-diF-Phenyl	oil*
504	Ethoxymethyl	*i*-Pr	2,4-diF-Phenyl	oil*
505	$CH_3OCH_2CH_2OCH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
506	1-(4-Acetoxybutyl)	*i*-Pr	2,4-diF-Phenyl	oil*
507	1-(3,4,4-Trifluoro-3-butenyl)	*i*-Pr	2,4-diF-Phenyl	oil*
508	1-(2-Phenylethyl)	*i*-Pr	2,4-diF-Phenyl	oil*
509	Cyclopropylmethyl	*i*-Pr	2,4-diF-Phenyl	oil*
510	(3,5-Dimethyloxazol-4-yl)methyl	*i*-Pr	2,4-diF-Phenyl	oil*

511	$PhCOCH(CH_3)$	*i*-Pr	2,4-diF-Phenyl	il*
512	$Et_2NC(O)CH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
513	$MeO_2CCH_2CH_2CH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
514	1-(3-Chloro-2-butenyl)	*i*-Pr	2,4-diF-Phenyl	oil*
515	1-(3-Methyl-2-butenyl)	*i*-Pr	2,4-diF-Phenyl	oil*
516	1-(4-Pentenyl)	*i*-Pr	2,4-diF-Phenyl	oil*
517	$CH_3C(O)CH(CH_3)$	*i*-Pr	2,4-diF-Phenyl	oil*
518	Trimethylsilylmethyl	*i*-Pr	2,4-diF-Phenyl	oil*
519	1-(2-Ethoxy-3-ethoxycarbonyl-2-propenyl)	*i*-Pr	2,4-diF-Phenyl	oil*
520	$PhCH_2OCH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
521	Cyclobutylmethyl	*i*-Pr	2,4-diF-Phenyl	oil*
522	1-(4-Fluorobutyl)	*i*-Pr	2,4-diF-Phenyl	oil*
523	1-(2-Pentenyl)	*i*-Pr	2,4-diF-Phenyl	oil*
524	$CH_3CH_2C(O)CH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
525	1-(3,3,3-Trifluoropropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
526	1-(4,4,4-Trifluorobutyl)	*i*-Pr	2,4-diF-Phenyl	oil*
527	*n*-Butyl	*i*-Pr	4-Cl-Phenyl	oil*
528	*n*-Pentyl	*i*-Pr	4-Cl-Phenyl	oil*
529	*n*-Hexyl	*i*-Pr	4-Cl-Phenyl	oil*
530	1-(3-Fluoropropyl)	*i*-Pr	4-Cl-Phenyl	oil*
531	2-(1,3-Dioxolan-2-yl)ethyl	*i*-Pr	4-Cl-Phenyl	oil*
532	2-(1,3-Dioxan-2-yl)ethyl	*i*-Pr	4-Cl-Phenyl	oil*
533	Methoxymethyl	*i*-Pr	4-Cl-Phenyl	oil*
534	Ethoxymethyl	*i*-Pr	4-Cl-Phenyl	oil*
535	$CH_3OCH_2CH_2OCH_2$	*i*-Pr	4-Cl-Phenyl	oil*
536	1-(4-Acetoxybutyl)	*i*-Pr	4-Cl-Phenyl	oil*
537	1-(3,4,4-Trifluoro-3-butenyl)	*i*-Pr	4-Cl-Phenyl	oil*
538	1-(2-Phenylethyl)	*i*-Pr	4-Cl-Phenyl	oil*
539	Cyclopropylmethyl	*i*-Pr	4-Cl-Phenyl	oil*
540	(3,5-Dimethyloxazol-4-yl)methyl	*i*-Pr	4-Cl-Phenyl	oil*
541	$PhCOCH(CH_3)$	*i*-Pr	4-Cl-Phenyl	oil*
542	$Et_2NC(O)CH_2$	*i*-Pr	4-Cl-Phenyl	il*
543	$MeO_2CCH_2CH_2CH_2$	*i*-Pr	4-Cl-Phenyl	oil*

544	1-(3-Chloro-2-butenyl)	*i*-Pr	4-Cl-Phenyl	oil*
545	1-(3-Methyl-2-butenyl)	*i*-Pr	4-Cl-Phenyl	oil*
546	1-(4-Pentenyl)	*i*-Pr	4-Cl-Phenyl	oil*
547	$CH_3C(O)CH(CH_3)$	*i*-Pr	4-Cl-Phenyl	oil*
548	Trimethylsilylmethyl	*i*-Pr	4-Cl-Phenyl	oil*
549	1-(2-Ethoxy-3-ethoxycarbonyl-2-propenyl)	*i*-Pr	4-Cl-Phenyl	oil*
550	Cyclobutylmethyl	*i*-Pr	4-Cl-Phenyl	oil*
551	1-(4-Fluorobutyl)	*i*-Pr	4-Cl-Phenyl	oil*
552	1-(2-Pentenyl)	*i*-Pr	4-Cl-Phenyl	oil*
553	$CH_3CH_2C(O)CH_2$	*i*-Pr	4-Cl-Phenyl	oil*
554	1-(3,3,3-Trifluoropropyl)	*i*-Pr	4-Cl-Phenyl	oil*
555	1-(4,4,4-Trifluorobutyl)	*i*-Pr	4-Cl-Phenyl	oil*
556	*n*-Butyl	*i*-Pr	Phenyl	oil*
557	*n*-Pentyl	*i*-Pr	Phenyl	oil*
558	*n*-Hexyl	*i*-Pr	Phenyl	oil*
559	1-(3-Fluoropropyl)	*i*-Pr	Phenyl	oil*
560	2-(1,3-Dioxola*n*-2-yl)ethyl	*i*-Pr	Phenyl	oil*
561	2-(1,3-Dioxa*n*-2-yl)ethyl	*i*-Pr	Phenyl	oil*
562	Methoxymethyl	*i*-Pr	Phenyl	oil*
563	Ethoxymethyl	*i*-Pr	Phenyl	oil*
564	$CH_3OCH_2CH_2OCH_2$	*i*-Pr	Phenyl	oil*
565	1-(4-Acetoxybutyl)	*i*-Pr	Phenyl	oil*
566	1-(3,4,4-Trifluoro-3-butenyl)	*i*-Pr	Phenyl	oil*
567	1-(2-Phenylethyl)	*i*-Pr	Phenyl	oil*
568	Cyclopropylmethyl	*i*-Pr	Phenyl	oil*
569	(3,5-Dimethyloxazol-4-yl)methyl	*i*-Pr	Phenyl	oil*
570	$PhCOCH(CH_3)$	*i*-Pr	Phenyl	oil*
571	$Et_2NC(O)CH_2$	*i*-Pr	Phenyl	oil*
572	$MeO_2CCH_2CH_2CH_2$	*i*-Pr	Phenyl	oil*
573	1-(3-Chloro-2-butenyl)	*i*-Pr	Phenyl	oil*
574	1-(3-Methyl-2-butenyl)	*i*-Pr	Phenyl	oil*
575	1-(4-Pentenyl)	*i*-Pr	Phenyl	oil*
576	$CH_3C(O)CH(CH_3)$	*i*-Pr	Phenyl	oil*

577	Trimethylsilylmethyl	*i*-Pr	Phenyl	oil*
578	1-(2-Ethoxy-3-ethoxycarbonyl-2-propenyl)	*i*-Pr	Phenyl	oil*
579	$PhCH_2OCH_2$	*i*-Pr	Phenyl	oil*
580	Cyclobutylmethyl	*i*-Pr	Phenyl	oil*
581	1-(4-Fluorobutyl)	*i*-Pr	Phenyl	oil*
582	1-(2-Pentenyl)	*i*-Pr	Phenyl	oil*
583	$CH_3CH_2C(O)CH_2$	*i*-Pr	Phenyl	oil*
584	1-(3,3,3-Trifluoropropyl)	*i*-Pr	Phenyl	oil*
585	1-(4,4,4-Trifluorobutyl)	*i*-Pr	Phenyl	oil*
586	$Me_2NC(O)CH_2$	*i*-Pr	4-F-Phenyl	117
587	$(EtO)_2P(O)CH_2$	*i*-Pr	4-F-Phenyl	oil*
588	$Me_2NC(O)CH_2$	*i*-Pr	Phenyl	152
589	1-(2-Ethyl-4-methylthiazol-5-yl)ethyl	*i*-Pr	2,4-diF-Phenyl	87-90
590	1-(2-Ethyl-4-methylthiazol-5-yl)ethyl	*i*-Pr	4-Cl-Phenyl	93-97
591	1-(2-Nitroethyl)	*i*-Pr	2,4-diF-Phenyl	92-98
592	1-(1-Methoxyethyl)	*i*-Pr	4-Cl-Phenyl	oil*
593	1-(1-Methoxyethyl)	*i*-Pr	2,4-diF-Phenyl	oil*
594	2-(3-Bromopropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
595	2-(1,3-Difluoropropyl)	*i*-Pr	2,4-diF-Phenyl	91-96
596	2-(3-Acetoxy-1-chloropropyl)	*i*-Pr	4-F-Phenyl	oil*
597	$F_3CC(O)CH_2$	*i*-Pr	4-Cl-Phenyl	oil*
598	$F_3CC(O)CH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
599	$(EtO)_2P(O)CH_2$	*i*-Pr	4-Cl-Phenyl	oil*
600	Allyl	2-(3-OMe-propyl)	2,6-DiMe-Phenyl	oil*
601	(5,6-Dihydro-1,2-Oxazin-3-yl)methyl	*i*-Pr	4-F-Phenyl	108-112
602	(5,6-Dihydro-1,2-Oxazin-3-yl)methyl	*i*-Pr	2,4-diF-Phenyl	87-95
603	1-(2-Nitropropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
604	1-(2-Nitropropyl)	*i*-Pr	Phenyl	oil*
605	1-(2-(6-Chloro-2-pyridyl)-2-propenyl)	*i*-Pr	Phenyl	il*

606	1-(2-(4-Fluorophenyl)-2-propenyl)	*i*-Pr	Phenyl	oil*
607	1-(2-Methyl-2-propenyl)	*i*-Pr	Phenyl	oil*
608	1-(2-Chlorol-2-propenyl)	*i*-Pr	Phenyl	oil*
609	2-(3-Butynyl)	*i*-Pr	Phenyl	oil*
610	*s*-Butyl (R)	*i*-Pr	Phenyl	53-55
611	*s*-Butyl (S)	*i*-Pr	Phenyl	55-57
612	*s*-Butyl (S)	*i*-Pr	Phenyl	41-43
613	*s*-Butyl (R)	*i*-Pr	4-F-Phenyl	41-43
614	$EtO_2CCH_2CH(CO_2Et)$	*i*-Pr	Phenyl	oil*
615	$EtO_2CCH_2CH(CO_2Et)$	*i*-Pr	4-F-Phenyl	oil*
616	$MeO_2CCH(CH_3)$	*i*-Pr	4-F-Phenyl	oil*
617	$(EtO)_2P(O)CH(CH_3)$	*i*-Pr	4-F-Phenyl	oil*
618	Thiocyanatomethyl	*i*-Pr	4-F-Phenyl	125-127
619	$PhC(O)NHCH_2$	*i*-Pr	2,4-diF-Phenyl	120-123
620	$PhC(O)NHCH_2$	*i*-Pr	Phenyl	145-146
621	$MeC(O)NHCH_2$	*i*-Pr	Phenyl	122-126
622	$MeC(O)NHCH_2$	*i*-Pr	2,4-diF-Phenyl	173-175
623	$MeO_2CCH(CH_3)$	*i*-Pr	4-Cl-Phenyl	oil*
624	(2-Tetrahydropyranyl)methyl	*i*-Pr	4-F-Phenyl	80-82
625	$CH_3C(O)N(CH_3)CH_2CH_2$	*i*-Pr	4-F-Phenyl	112-126
626	1-(2-Fluoroethyl)	*i*-Pr	4-F-Phenyl	95-96
627	1-(2-Methoxyethyl)	*i*-Pr	4-F-Phenyl	oil*
628	1-(2-Methoxyethyl)	*i*-Pr	2,4-diF-Phenyl	94-97
629	1-(2,2-Diethoxyethyl)	*i*-Pr	4-F-Phenyl	oil*
630	1-(2,2-Diethoxyethyl)	*i*-Pr	2,4-diF-Phenyl	84-88
631	1-(2-Methoxyethyl)	*i*-Pr	Phenyl	oil*
632	1-(2,2-Diethoxyethyl)	*i*-Pr	Phenyl	oil*
633	1-(2,2-Diethoxyethyl)	*i*-Pr	4-Cl-Phenyl	73-75
634	1-(2-Chloro-2-propenyl)	*i*-Pr	2,4-diF-Phenyl	oil*
635	*n*-Butyl	*i*-Pr	2,4-diF-Phenyl	oil*
636	*n*-Pentyl	*i*-Pr	2,4-diF-Phenyl	oil*
637	*n*-Hexyl	*i*-Pr	2,4-diF-Phenyl	oil*
638	$Me_2NC(O)CH_2CH_2$	*i*-Pr	4-F-Phenyl	100

639	*c*-PrC(O)CH_2	*i*-Pr	4-Cl-Phenyl	oil*
640	*c*-BuC(O)CH_2	*i*-Pr	4-F-Phenyl	oil*
641	*c*-BuC(O)CH_2	*i*-Pr	Phenyl	115-117
642	*c*-BuC(O)CH_2	*i*-Pr	2,4-diF-Phenyl	oil*
643	*c*-BuC(O)CH_2	*i*-Pr	4-Cl-Phenyl	oil*
644	$(EtO)_2$P(O)CH(CH_3)	*i*-Pr	4-Cl-Phenyl	oil*
645	(2-Chloro-1,3,4-thiadiazol-5-yl)methyl	*i*-Pr	2,4-diF-Phenyl	106-109
646	(2-Chloro-1,3,4-thiadiazol-5-yl)methyl	*i*-Pr	4-F-Phenyl	110-112
647	1-(3-Cyanopropyl)	*i*-Pr	4-F-Phenyl	oil*
648	1-(2-t-Butyl-2-propenyl)	*i*-Pr	Phenyl	oil*
649	1-(2-*i*-Propyl-2-propenyl)	*i*-Pr	Phenyl	oil*
650	1-(2-Benzyl-2-propenyl)	*i*-Pr	Phenyl	oil*
651	2-(3-Carbomethoxy-3-butenyl)	*i*-Pr	Phenyl	oil*
652	1-(1-Ethynyl-3-methyl-2-butenyl)	*i*-Pr	Phenyl	oil*
653	(2-Chloro-1,3,4-thiadiazol-5-yl)methyl	*i*-Pr	4-Cl-Phenyl	oil*
654	(2-Chloro-1,3,4-thiadiazol-5-yl)methyl	*i*-Pr	Phenyl	oil*
655	2-(4-Ethynyl-2-methyl-3-butenyl)	*i*-Pr	Phenyl	oil*
656	2-(5,6-Dihydro-1,2-Oxazin-3-yl)ethyl	*i*-Pr	4-F-Phenyl	oil*
657	2-(3-Butynyl)	*i*-Pr	2,4-diF-Phenyl	oil*
658	2-(3-Butynyl)	*i*-Pr	4-Cl-Phenyl	oil*
659	(2-Tetrahydropyranyl)methyl	*i*-Pr	Phenyl	97-100
660	(2-Tetrahydropyranyl)methyl	*i*-Pr	4-Cl-Phenyl	82-84
661	(3,4-Dihydroisoxazol-3-yl)methyl	*i*-Pr	4-Cl-Phenyl	105-107
662	$(MeO)_2$P(O)CH_2CH_2	*i*-Pr	4-F-Phenyl	79-85
663	*i*-Propyl	*i*-Pr	4-Pyridyl	85-89
664	*s*-Butyl (S)	*i*-Pr	4-Cl-Phenyl	53-56
665	*s*-Butyl (R)	*i*-Pr	4-Cl-Phenyl	54-56
666	*s*-Butyl (S)	*i*-Pr	2,4-diF-Phenyl	59-61

667	*s*-Butyl (R)	*i*-Pr	2,4-diF-Phenyl	58-60
668	1-(2-Fluoroethyl)	*i*-Pr	4-Cl-Phenyl	120-121
669	1-(2-Fluoroethyl)	*i*-Pr	Phenyl	88-89
670	1-(2-Fluoroethyl)	*i*-Pr	2,4-diF-Phenyl	90-91
671	$Me_2NC(O)CH_2CH_2$	*i*-Pr	Phenyl	91
672	2-(1,3-Dichloropropyl)	*i*-Pr	4-F-Phenyl	oil*
673	1-(2,2-Dichloroethyl)	*i*-Pr	2,4-diF-Phenyl	121-122
674	1-(3-Cyanopropyl)	*i*-Pr	Phenyl	89-92
675	1-(3-Cyanopropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
676	(3,4-Dihydroisoxazol-3-yl)methyl	*i*-Pr	2,4-diF-Phenyl	66-68
677	$PhCH(CO_2Me)$	*i*-Pr	4-F-Phenyl	oil*
678	$HOCH_2CH_2CH(CO_2Me)$	*i*-Pr	Phenyl	120-123
679	$HOCH_2CH_2CH(CO_2Me)$	*i*-Pr	4-Cl-Phenyl	107-110
680	$HOCH_2CH_2CH(CO_2Me)$	*i*-Pr	4-F-Phenyl	102-106
681	$EtO_2CCH_2CH(CO_2Et)$	*i*-Pr	4-Cl-Phenyl	oil*
682	(1-Ethyl-5-Chloropyrazol-4-yl)methyl	*i*-Pr	2,4-diF-Phenyl	oil*
683	(1-Ethyl-5-Chloropyrazol-4-yl)methyl	*i*-Pr	Phenyl	oil*
684	(1-Ethyl-5-Chloropyrazol-4-yl)methyl	*i*-Pr	4-Cl-Phenyl	oil*
685	(1-Ethyl-5-Chloropyrazol-4-yl)methyl	*i*-Pr	4-F-Phenyl	oil*
686	1-(1-Ethyl-5-Chloropyrazol-4-yl)ethyl	*i*-Pr	4-F-Phenyl	oil*
687	$Me_2NC(O)CH_2CH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
688	*i*-Propyl	*s*-Butyl (S)	4-F-Phenyl	59-61
689	*i*-Propyl	*s*-Butyl	4-F-Phenyl	74-75
690	*i*-Propyl	*s*-Butyl (R)	4-F-Phenyl	64-65
691	*i*-Propyl	*i*-Pr	4-Br-Phenyl	75-76
692	3-Cyclohexenyl	*i*-Pr	4-F-Phenyl	80-82
693	$HC(O)CH(CH_3)$	*i*-Pr	Phenyl	oil*
694	3-Cyclohexenyl	*i*-Pr	2,4-diF-Phenyl	oil*
695	3-Cyclohexenyl	*i*-Pr	4-Cl-Phenyl	87-89

696	3-Cyclohexenyl	*i*-Pr	Phenyl	oil*
697	$(MeO)_2P(O)CH_2CH_2$	*i*-Pr	Phenyl	oil*
698	$(MeO)_2P(O)CH_2CH_2$	*i*-Pr	4-Cl-Phenyl	oil*
699	1-(Cyclopropyl)ethyl	*i*-Pr	Phenyl	65-67
700	1-(Cyclopropyl)ethyl	*i*-Pr	4-Cl-Phenyl	52-54
701	1-(Cyclobutyl)ethyl	*i*-Pr	4-Cl-Phenyl	oil*
702	1-(Cyclobutyl)ethyl	*i*-Pr	2,4-diF-Phenyl	oil*
703	1-(Morpholinocarbonyl)ethyl	*i*-Pr	4-Cl-Phenyl	163
704	$Me_2NC(S)CH(CH_3)$	*i*-Pr	Phenyl	141
705	1-(Morpholinocarbonyl)ethyl	*i*-Pr	4-F-Phenyl	oil*
706	(3,4-Dihydroisoxazol-3-yl)methyl	*i*-Pr	Phenyl	oil*
707	2-(1-Chloro-3-fluoropropyl)	*i*-Pr	4-F-Phenyl	85-86
708	2-(1-Acetoxy-3-chloropropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
709	Fluoromethyl	*i*-Pr	4-F-Phenyl	126-127
710	2,2-Difluoroethyl	*i*-Pr	4-F-Phenyl	94-96
711	2,2-Difluoroethyl	*i*-Pr	2,4-diF-Phenyl	105-108
712	1-(4-Chlorobutyl)	*i*-Pr	4-F-Phenyl	oil*
713	1-(3-Chloropropyl)	*i*-Pr	4-F-Phenyl	oil*
714	1-(2-Chloropropyl) (S)	*i*-Pr	2,4-diF-Phenyl	oil*
715	(2-Tetrahydropyranyl)methyl	*i*-Pr	2,4-diF-Phenyl	oil*
716	(2-Phenyl-1,3,4-oxadiazol-5-yl)methyl	*i*-Pr	Phenyl	130-132
717	1-(Cyclobutyl)ethyl	*i*-Pr	Phenyl	oil*
718	1-(Cyclobutyl)ethyl	*i*-Pr	4-F-Phenyl	oil*
719	$Me_2NC(O)CH_2CH_2$	*i*-Pr	4-Cl-Phenyl	82-83
720	1-(Cyclopropyl)ethyl	*i*-Pr	2,4-diF-Phenyl	oil*
721	1-(3,4-Dihydroisoxazol-3-yl)ethyl	*i*-Pr	4-F-Phenyl	oil*
722	(5-Phenyl-1, 2, 5-oxadiazol-2-yl)methyl	*i*-Pr	Phenyl	120-121
723	$PhCH(CO_2Me)$	*i*-Pr	Phenyl	oil*
724	$PhCH(CO_2Me)$	*i*-Pr	4-Cl-Phenyl	oil*
725	1-(2-Chloro-1-methoxyethyl)	*i*-Pr	4-Cl-Phenyl	oil*
726	1-(1,2-Dimethoxyethyl)	*i*-Pr	4-Cl-Phenyl	oil*

727	$CH_3C(O)NHCH_2CH_2$	*i*-Pr	4-F-Phenyl	il*
728	$Me_2NC(S)CH(CH_3)$	*i*-Pr	4-F-Phenyl	130
729	1-(3,4-Dihydroisoxazol-3-yl)ethyl	*i*-Pr	Phenyl	oil*
730	1-(3,4-Dihydroisoxazol-3-yl)ethyl	*i*-Pr	2,4-diF-Phenyl	oil*
731	1-(2-(6-Chloro-2-pyridyl)-2-propenyl)	*i*-Pr	Phenyl	oil*
732	1-(2-Carbomethoxy-2-propenyl)	*i*-Pr	4-F-Phenyl	oil*
733	$Me_2NC(S)CH(CH_3)$	*i*-Pr	4-Cl-Phenyl	136
734	1-(1,2-Dimethoxyethyl)	*i*-Pr	Phenyl	oil*
735	1-(2-Chloro-1-methoxyethyl)	*i*-Pr	Phenyl	oil*
736	$(EtO)_2P(O)CH_2$	*i*-Pr	2,4-diF-Phenyl	113-115
737	1-(2-Chloro-1-methoxyethyl)	*i*-Pr	2,4-diF-Phenyl	oil*
738	1-(1,2-Dimethoxyethyl)	*i*-Pr	2,4-diF-Phenyl	oil*
739	$Me_2NC(S)CH(CH_3)$	*i*-Pr	2,4-diF-Phenyl	107
740	(5,6-Dihydro-1,2,4-Dioxazin-3-yl)methyl	*i*-Pr	4-Cl-Phenyl	107
741	$PhCON(CH_3)CH_2CH_2$	*i*-Pr	4-F-Phenyl	141-146
742	1-(1-Ethoxypropyl)	*i*-Pr	4-F-Phenyl	oil*
743	Propargyl	*i*-Pr	4-F-Phenyl	oil*
744	1-(3-Butynyl)	*i*-Pr	2,4-diF-Phenyl	oil*
745	2,2-Difluoroethyl	*i*-Pr	4-Cl-Phenyl	104-107
746	2,2-Difluoroethyl	*i*-Pr	Phenyl	oil*
747	1-(2-Chloropropyl) (S)	*i*-Pr	Phenyl	oil*
748	1-(2-Chloropropyl) (S)	*i*-Pr	4-Cl-Phenyl	oil*
749	1-(3-Chloropropyl)	*i*-Pr	4-Cl-Phenyl	68-72
750	1-(3-Chloropropyl)	*i*-Pr	Phenyl	oil*
751	*s*-Butyl	*i*-Pr	4-F-Phenyl	42-44
752	1-(3-Bromo-2-methylpropyl)	*i*-Pr	4-F-Phenyl	96-100
753	3-(4-Pentynyl)	*i*-Pr	4-F-Phenyl	oil*
754	Propargyl	*i*-Pr	Phenyl	75-76
755	Bromomethyl	*i*-Pr	Phenyl	82-84
756	1-(4,5-Dimethylthiazol-2-yl)ethyl	*i*-Pr	Phenyl	101-104

757	1-(4,5-Dimethylthiazol-2-yl)ethyl	*i*-Pr	4-F-Phenyl	103-105
758	(5,6-Dihydro-1,2,4-Dioxazin-3-yl)methyl	*i*-Pr	2,4-diF-Phenyl	oil*
759	1-(3,4-Dihydroisoxazol-3-yl)ethyl	*i*-Pr	4-Cl-Phenyl	oil*
760	(5,6-Dihydro-6-OMe-1,2-oxazin-3-yl)methyl	*i*-Pr	4-Cl-Phenyl	107-109
761	$PhCON(CH_3)CH_2CH_2$	*i*-Pr	Phenyl	124-127
762	$PhCON(CH_3)CH_2CH_2$	*i*-Pr	2,4-diF-Phenyl	106-108
763	2-(3-Butynyl)	*i*-Pr	4-F-Phenyl	oil*
764	Propargyl	*i*-Pr	2,4-diF-Phenyl	oil*
765	(5,6-Dihydro-1,2,4-Dioxazin-3-yl)methyl	*i*-Pr	4-F-Phenyl	oil*
766	(Dihydro-6-OMe-1,2-oxazin-3-yl)methyl	*i*-Pr	4-F-Phenyl	oil*
767	1-(3-Butynyl)	*i*-Pr	4-F-Phenyl	oil*
768	1-(3-Butynyl)	*i*-Pr	Phenyl	oil*
769	(5-*i*-Propyl-1, 2, 5-oxadiazol-2-yl)methyl	*i*-Pr	Phenyl	oil*
770	(5-*c*-Hexyl-1, 2, 5-oxadiazol-2-yl)methyl	*i*-Pr	Phenyl	106-108
771	*i*-Propyl	*i*-Pr	2-Cl-5-Pyridiyl	oil*
772	1-(1-Ethoxypropyl)	*i*-Pr	4-Cl-Phenyl	oil*
773	1-(1-Ethoxypropyl)	*i*-Pr	Phenyl	oil*
774	1-(1-Ethoxypropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
775	$CH_3O_2CN(CH_3)CH_2CH_2$	*i*-Pr	Phenyl	oil*
776	$(EtO)_2P(O)CH(CH_3)$	*i*-Pr	2,4-diF-Phenyl	oil*
777	$(CH_3O)_2P(O)CH_2CH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
778	$CH_3O_2CN(CH_3)CH_2CH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
779	$CH_3O_2CN(CH_3)CH_2CH_2$	*i*-Pr	4-Cl-Phenyl	oil*
780	*i*-Propyl	*i*-Pr	4-OMe-Phenyl	93-94
781	1-(3-Methyl-3-nitropropyl)	*i*-Pr	2,4-diF-Phenyl	118-120
782	1-(3, 3-Dichloro-2-propenyl)	*i*-Pr	4-F-Phenyl	oil*
783	3-(4-Pentynyl)	*i*-Pr	2,4-diF-Phenyl	oil*

784	Propargyl	*i*-Pr	4-Cl-Phenyl	oil*
785	1-(4,5-Dimethylthiazol-2-yl)ethyl	*i*-Pr	2,4-diF-Phenyl	oil*
786	Pyrrolidinothiocarbonylmethyl	*i*-Pr	2,4-diF-Phenyl	68
787	Pyrrolidinothiocarbonylmethyl	*i*-Pr	4-Cl-Phenyl	144
788	Pyrrolidinothiocarbonylmethyl	*i*-Pr	Phenyl	117
789	Pyrrolidinothiocarbonylmethyl	*i*-Pr	4-F-Phenyl	142
790	2-(3-Methoximinopropyl)	*i*-Pr	Phenyl	82-87
791	1-(4-Chlorobutyl)	*i*-Pr	4-Cl-Phenyl	103-109
792	1-(4-Chlorobutyl)	*i*-Pr	Phenyl	oil*
793	4-Cyclohexenyl	*i*-Pr	4-F-Phenyl	107-108
794	1-(2-Bromoethyl)	*i*-Pr	4-F-Phenyl	105-106
795	1-(2-Bromoethyl)	*i*-Pr	2,4-diF-Phenyl	77-80
796	1-(2-Bromoethyl)	*i*-Pr	4-Cl-Phenyl	85-87
797	(Pinenyl)methyl	*i*-Pr	Phenyl	oil*
798	*i*-Propyl	*i*-Pr	(3,5-Dimethylisoxazol-4-yl)methyl	oil*
799	1-(2,2-Dimethylcyclopropyl)	*i*-Pr	4-F-Phenyl	69-72
800	1-(2,2-Dimethylcyclopropyl)	*i*-Pr	Phenyl	oil*
801	1-(2,2-Dimethylcyclopropyl)	*i*-Pr	4-Cl-Phenyl	oil*
802	1-(2,2-Dimethylcyclopropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
803	3-(4-Pentynyl)	*i*-Pr	Phenyl	oil*
804	1-(3-Butynyl)	*i*-Pr	4-Cl-Phenyl	oil*
805	2-(1,3-Dibromopropyl)	*i*-Pr	4-F-Phenyl	oil*
806	1-(3-Bromo-2,2-dimethylpropyl)	*i*-Pr	4-F-Phenyl	122-126
807	(5,6-Dihydro-6-methoxy-1,2-oxazin-3-yl)methyl	*i*-Pr	2,4-diF-Phenyl	110-115
808	3-(4-Pentynyl)	*i*-Pr	4-Cl-Phenyl	oil*
809	(5,6-Dihydro-6-methoxy-1,2-oxazin-3-yl)methyl	*i*-Pr	Phenyl	96-98
810	1-(4,5-Dihydro-5-methoxyisoxazol-3-yl)ethyl	*i*-Pr	4-F-Phenyl	oil*
811	1-(4,5-Dihydroisoxazol-5-yl)ethyl	*i*-Pr	4-F-Phenyl	oil*

812	1-(4,5-Dihydro-5-methoxyisoxazol-3-yl)ethyl	*i*-Pr	Phenyl	oil*
813	*i*-Pr	c-PrCH$_2$	4-F-Phenyl	76 -77
814	1-(4,5-Dihydroisoxazol-5-yl)ethyl	*i*-Pr	4-Cl-Phenyl	oil*
815	1-(4,5-Dihydroisoxazol-5-yl)ethyl	*i*-Pr	2,4-diF-Phenyl	oil*
816	1-(4,5-Dihydroisoxazol-5-yl)ethyl	*i*-Pr	Phenyl	oil*
817	2-(1,1,1-Trifluoropropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
818	3-(1-Trimethylsilylpropyl)	*i*-Pr	4-F-Phenyl	oil
819	1-(2,3-Epoxy-2-methylpropyl) (R)	*i*-Pr	4-F-Phenyl	oil*
820	1-(2,3-Epoxy-2-methylpropyl) (S)	*i*-Pr	4-F-Phenyl	78 - 80
821	(MeO$_2$C)$_2$CH	*i*-Pr	Phenyl	oil
822	1-(3-Chloropropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
823	1-(4-Chlorobutyl)	*i*-Pr	2,4-diF-Phenyl	oil*
824	2-(3-Chloro-3-methoxypropyl)	*i*-Pr	Phenyl	oil*
825	2-(3-Chloro-3-methoxypropyl)	*i*-Pr	4-F-Phenyl	oil*
826	1-(2,2-Dichloroethyl)	*i*-Pr	4-F-Phenyl	95 - 98
827	1-(2-Butynyl)	*i*-Pr	2,4-diF-Phenyl	131 - 132
828	1-(2-Butynyl)	*i*-Pr	4-F-Phenyl	115 - 116.5
829	*i*-Pr	*i*-Pr	(5-*t*-Butyl-1,2,4-oxadiazol-3-yl)methyl	oil*
830	1-(2-Butynyl)	*i*-Pr	4-Cl-Phenyl	24 - 25
831	1-(2-Cyclopropylethyl)	*i*-Pr	4-F-Phenyl	70 - 72
832	1-(2-Cyclopropylethyl)	*i*-Pr	Phenyl	70 - 72
833	1-(2-Butynyl)	*i*-Pr	Phenyl	90.5 - 92
834	1-(1,3-Dioxolan-2-yl)ethyl	*i*-Pr	4-F-Phenyl	104 - 107
835	1-(1,3-Dioxan-2-yl)ethyl	*i*-Pr	4-F-Phenyl	94 - 96
836	1-(5,5-Dimethyl-1,3-dioxan-2-yl)ethyl	*i*-Pr	4-F-Phenyl	90 - 93
837	1-(1,3-Dioxepin-5-en-2-yl)ethyl	*i*-Pr	4-F-Phenyl	oil*

838	*i*-Pr	*i*-Pr	2,6-DiF-Phenyl	80 - 83
839	*i*-Pr	*i*-Pr	2,3-DiF-Phenyl	oil*
840	*i*-Pr	Et	4-F-Phenyl	oil*
841	2-(3-Butenyl)	*i*-Pr	4-Cl-Phenyl	oil*
842	2-(3-Butenyl)	*i*-Pr	2,4-diF-Phenyl	oil*
843	2-(3-Butenyl)	*i*-Pr	Phenyl	oil*
844	1-(3-Methylenecyclobutane)	*i*-Pr	4-F-Phenyl	60 - 61
845	1-(3-Methylenecyclobutane)	*i*-Pr	2,4-diF-Phenyl	oil*
846	1-(3-Methylenecyclobutane)	*i*-Pr	Phenyl	oil*
847	1-(3-Methylenecyclobutane)	*i*-Pr	4-Cl-Phenyl	81 - 84
848	3-Cyclopentene	*i*-Pr	4-F-Phenyl	71 - 74
849	$HC(O)CH(CH_3)$	*i*-Pr	4-Cl-Phenyl	oil*
850	$HC(O)CH(CH_3)$	*i*-Pr	Phenyl	oil*
851	(3-Chloro-1-methylpyrazol-4-yl)methyl	*i*-Pr	4-F-Phenyl	105 - 107
852	(3-Chloro-1-methylpyrazol-4-yl)methyl	*i*-Pr	4-Cl-Phenyl	oil*
853	(3-Chloro-1-methylpyrazol-4-yl)methyl	*i*-Pr	Phenyl	oil*
854	(3-Chloro-1-methylpyrazol-4-yl)methyl	*i*-Pr	2,4-diF-Phenyl	oil*
855	(1-Methyl-5-chloro-3-trifluoromethylpyrazol-4-yl)methyl	*i*-Pr	Phenyl	152 - 154
856	(1-Methyl-5-chloro-3-trifluoromethylpyrazol-4-yl)methyl	*i*-Pr	4-F-Phenyl	148 - 149
857	(1-Methyl-5-chloro-3-trifluoromethylpyrazol-4-yl)methyl	*i*-Pr	2,4-diF-Phenyl	112 - 114
858	(1-Methyl-5-chloro-3-trifluoromethylpyrazol-4-yl)methyl	*i*-Pr	4-Cl-Phenyl	132 - 136
859	(1-Methyl-4-bromopyrazol-3-yl)methyl	*i*-Pr	Phenyl	161 - 165

860	(1-Methyl-4-bromopyrazol-3-yl)methyl	*i*-Pr	4-F-Phenyl	124 - 132
861	1-(1-Methyl-4-bromopyrazol-3-yl)ethyl	*i*-Pr	Phenyl	123 - 124
862	1-(1-Methyl-4-bromopyrazol-3-yl)ethyl	*i*-Pr	4-F-Phenyl	122 - 124
863	(1-Methyl-4-bromopyrazol-3-yl)methyl	*i*-Pr	4-Cl-Phenyl	147 - 150
864	1-(1-Methyl-4-bromopyrazol-3-yl)ethyl	*i*-Pr	4-Cl-Phenyl	119 - 121
865	(1-Methyl-4-bromopyrazol-3-yl)methyl	*i*-Pr	2,4-diF-Phenyl	116 - 117
866	1-(1-Methyl-4-bromopyrazol-3-yl)ethyl	*i*-Pr	2,4-diF-Phenyl	oil*
867	Cyclooctyl	*i*-Pr	4-F-Phenyl	81 - 84
868	*i*-Pr	2-(3-MeO-propyl)	Phenyl	73 - 77
869	*i*-Pr	2-(3-MeO-propyl)	4-F-Phenyl	119 - 125
870	*i*-Pr	2-(3-MeO-propyl)	4-Cl-Phenyl	76 - 81
871	2-(3-Chloro-3-methoxypropyl)	*i*-Pr	4-Cl-Phenyl	oil*
872	2-(3-Chloro-3-methoxypropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
873	1-(2,2-Dichloroethyl)	*i*-Pr	4-Cl-Phenyl	80 - 88
874	1-(2,2-Dichloroethyl)	*i*-Pr	Phenyl	95 - 96
875	1-(2-Chloropropyl) (S)	*i*-Pr	4-F-Phenyl	55 - 60
876	2-(1,1,1-Trifluoropropyl)	*i*-Pr	4-Cl-Phenyl	-
877	Cyclooctyl	*i*-Pr	Phenyl	50 - 58
878	*i*-Pr	Allyl	Phenyl	58 - 60
879	Cyclooctyl	*i*-Pr	4-Cl-Phenyl	99 - 103
880	Cyclooctyl	*i*-Pr	2,4-diF-Phenyl	89 - 93
881	$Me_2NC(O)OCH_2CH_2$	*i*-Pr	4-F-Phenyl	94 - 96
882	3-(1-Hexynyl)	*i*-Pr	Phenyl	oil*
883	*i*-Pr	$(CD_3)_2CH$	4-F-Phenyl	66 - 68
884	1-(3-Allyloxy-2-methoximinopropyl)	*i*-Pr	4-F-Phenyl	oil*
885	1-(3-Allyloxy-2-methoximinopropyl)	*i*-Pr	Phenyl	oil*

886	1-(3-Allyloxy-2-methoximinopropyl)	*i*-Pr	2,4-diF-Phenyl	il*
887	1-(3-Allyloxy-2-methoximinopropyl)	*i*-Pr	4-Cl-Phenyl	oil*
888	*i*-Pr	2-(1-Chloropropyl)	4-Cl-Phenyl	oil*
889	(1,3-Dioxolan-4-yl)methyl	*i*-Pr	4-F-Phenyl	75 - 78
890	(2,2-Dimethyl-1,3-dioxolan-4-yl)methyl	*i*-Pr	4-F-Phenyl	110 - 113
891	(1,3-Dioxolan-4-yl)methyl	*i*-Pr	Phenyl	91 - 96
892	2-Methoxymethylpyrrolidin-1-yl	*i*-Pr	4-F-Phenyl	oil*
893	1-(3-Methylbutyl)	*i*-Pr	Phenyl	63 - 65
894	1-(3-Methylbutyl)	*i*-Pr	4-Cl-Phenyl	64 - 66
895	1-(3-Methylbutyl)	*i*-Pr	4-F-Phenyl	88 - 91
896	1-(3-Methylbutyl)	*i*-Pr	2,4-diF-Phenyl	54 - 56
897	3-(1-Hexynyl)	*i*-Pr	2,4-diF-Phenyl	63 - 64
898	1-(1,3-Dioxepin-2-yl)ethyl	*i*-Pr	4-F-Phenyl	oil*
899	(1,3-Dioxolan-2-yl)methyl	*i*-Pr	4-F-Phenyl	84 - 87
900	1-(3-Benzyloxy-2-methoximinopropyl)	*i*-Pr	4-F-Phenyl	oil*
901	1-(3-Benzyloxy-2-methoximinopropyl)	*i*-Pr	Phenyl	oil*
902	1-(3-Methoxy-2-methoximinopropyl)	*i*-Pr	4-F-Phenyl	oil*
903	1-(3-Methoxy-2-methoximinopropyl)	*i*-Pr	Phenyl	oil*
904	1-(3-Methoxy-2-methoximinopropyl)	*i*-Pr	Phenyl	oil*
905	*i*-Pr	2-(1,1-Dimethoxypropyl)	4-Cl-Phenyl	oil*
906	*i*-Pr	2-(1-Chloropropyl)	Phenyl	92 - 94
907	*i*-Pr	2-(1-Chloropropyl)	4-F-Phenyl	95 - 97
908	*i*-Pr	2-(3-Chlorobutyl)	Phenyl	oil*
909	*i*-Pr	2-(3-Chlorobutyl)	4-F-Phenyl	oil*
910	*i*-Pr	n-Bu	4-F-Phenyl	72 - 73

911	*i*-Pr	n-Pr	4-F-Phenyl	63 - 64
912	*i*-Pr	*i*-Bu	4-F-Phenyl	66 - 67
913	$CH_3C(O)CH_2CH_2$	*i*-Pr	Phenyl	oil*
914	$HC(O)CH_2CH_2$	*i*-Pr	4-F-Phenyl	oil*
915	$CH_3C(O)CH_2CH_2CH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
916	$CH_3C(O)CH_2CH_2CH_2$	*i*-Pr	4-Cl-Phenyl	oil*
917	3-(1-Hexynyl)	*i*-Pr	4-Cl-Phenyl	oil*
918	*i*-Pr	2-(1,1,1-Trifluoropropyl)	Phenyl	92 - 94
919	*i*-Pr	2-(1,1-Dimethoxypropyl)	Phenyl	oil*
920	*i*-Pr	2-(1,1-Dimethoxypropyl)	4-F-Phenyl	oil*
921	*i*-Pr	1-(1-Cyanoethyl)	4-F-Phenyl	80 - 82
922	1-(3-Methoxy-2-methoximinopropyl)	*i*-Pr	4-Cl-Phenyl	oil*
923	1-(3-Methoxy-2-methoximinopropyl)	*i*-Pr	2,4-diF-Phenyl	oil*
924	*i*-Pr	Allyl	4-F-Phenyl	57 - 59
925	*i*-Pr	c-Hexyl	4-F-Phenyl	126 - 131
926	*i*-Pr	c-Pentyl	4-F-Phenyl	93 - 95
927	3-(Cyclopentene)	*i*-Pr	2,4-diF-Phenyl	oil*
928	3-(Cyclopentene)	*i*-Pr	4-Cl-Phenyl	100 - 103
929	3-(Cyclopentene)	*i*-Pr	Phenyl	oil*
930	1-(3-Oxocyclobutyl)	*i*-Pr	4-F-Phenyl	oil*
931	1-(3-Oxocyclobutyl)	*i*-Pr	2,4-diF-Phenyl	95 - 97
932	1-(3-Oxocyclobutyl)	*i*-Pr	Phenyl	148 - 150
933	1-(3-Oxocyclobutyl)	*i*-Pr	4-Cl-Phenyl	120 - 122
934	$CH_3C(O)CH_2CH_2$	*i*-Pr	4-F-Phenyl	94 - 95
935	$CH_3C(O)CH_2CH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
936	$CH_3C(O)CH_2CH_2$	*i*-Pr	4-Cl-Phenyl	111 - 113
937	1-(3-Butenyl)	*i*-Pr	4-F-Phenyl	40 - 42
938	1-(3-Butenyl)	*i*-Pr	2,4-diF-Phenyl	58 - 60
939	1-(3-Butenyl)	*i*-Pr	Phenyl	43 - 45
940	1-(3-Butenyl)	*i*-Pr	4-Cl-Phenyl	50 - 51

941	*i*-Pr	Neopentyl	4-F-Phenyl	88 - 89
942	*i*-Pr	$(CH_3)_3CCH_2CH_2$	4-F-Phenyl	79 - 80
943	2-(1-Chloro-3-Fluoropropyl)	*i*-Pr	4-Cl-Phenyl	87 - 90
944	2-(1,3-Dichloropropyl)	*i*-Pr	4-Cl-Phenyl	79 - 82
945	4-(2,3,5,6-Tetrahydrothiopyranyl)	*i*-Pr	4-F-Phenyl	163 –165
946	4-(2,3,5,6-Tetrahydrothiopyranyl)	*i*-Pr	Phenyl	145 -148
947	4-(2,3,5,6-Tetrahydrothiopyranyl)	*i*-Pr	2,4-diF-Phenyl	oil*
948	4-(2,3,5,6-Tetrahydrothiopyranyl)	*i*-Pr	4-Cl-Phenyl	153 - 157
949	3-(2,3,4,5-Tetrahydrothienyl)	*i*-Pr	4-F-Phenyl	67 -70
950	2-(1-Chloro-3-Fluoropropyl)	*i*-Pr	Phenyl	100- 103
951	*i*-Pr	3-(2,3,4,5-Tetrahydrothienyl)	4-F-Phenyl	114 -117
952	*i*-Pr	N=CHMe	Phenyl	oil*
953	*i*-Pr	$N{=}CMe_2$	Phenyl	oil*
954	$PyrrolidinoC(O)OCH_2CH_2$	*i*-Pr	Phenyl	100 - 104
955	*i*-Pr	2-(1,3-DiCl-propyl)	Phenyl	oil*
956	*i*-Pr	2-(1,3-DiCl-propyl)	4-F-Phenyl	oil*
957	*i*-Pr	3-(2-Me-butyl)	4-F-Phenyl	109 - 110
958	*c*-Pr	$(CD_3)_2CH$	4-F-Phenyl	69 – 70
959	3-(2-Methyl-4-pentynyl)	*i*-Pr	Phenyl	oil*
960	$EtOC(O)OCH_2CH_2$	*i*-Pr	4-F-Phenyl	105-108
961	*i*-Pr	3-Pentyl	4-F-Phenyl	55 - 57
962	$CH_3C(O)CH_2CH_2CH_2$	*i*-Pr	4-F-Phenyl	oil*
963	$CH_3C(O)CH_2CH_2CH_2$	*i*-Pr	Phenyl	oil*
964	$HC(O)CH_2CH_2$	*i*-Pr	2,4-diF-Phenyl	oil*
965	$HC(O)CH_2CH_2$	*i*-Pr	Phenyl	oil*
966	$HC(O)CH_2CH_2$	*i*-Pr	4-Cl-Phenyl	98 - 100
967	4-(1-Hexynyl)	*i*-Pr	4-F-Phenyl	oil*

*see Index Table D for ^1H NMR data.

INDEX TABLE D

Cmpd No.	^{1}H NMR Data ($CDCl_3$ solution unless indicated otherwise)[a]
77	δ 7.30 (d, 1H), 7.20 (d, 1H), 6.99 (m, 1H), 4.89 (s, 2H), 3.50 (q, 4H), 1.24 (t, 6H).
80	δ 7.22 (m, 4H), 7.09 (m, 2H), 6.96 (m, 1H), 4.78 (s, 2H), 4.42 (m, 1H), 1.20 (d, 6H).
82	δ 7.32 (d, 1H), 7.20 (d, 1H), 7.00 (m, 1H), 4.90 (s, 2H), 3.95 (m, 1H), 3.40 (m, 2H), 1.82 (m, 4H), 1.70-1.50 (m, 2H), 1.40-1.20 (m, 7H).
83	δ 7.3 (d, 1H), 7.19 (d, 1H), 6.96 (m, 1H), 4.88 (s, 2H), 4.38 (m, 1H), 4.20 (s, 2H), 3.80 (t, 2H) 2.30 (br.s, 2H), 1.28 (d, 6H).
84	δ 7.41 (d, 1H), 7.10 (m, 4H), 4.75 (s, 2H), 3.50 (q, 4H), 3.45 (s, 3H), 1.24 (t, 6H).
85	δ 7.41-7.14 (m, 9H), 4.66 (s, 2H), 3.44 (s, 3H), 2.37 (s, 3H).
87	δ 7.38 (m, 1H), 7.10 (m, 4H), 6.92 (m, 2H), 4.64 (m, 3H), 2.36 (s, 3H), 1.10 (m, 6H).
90	δ 7.10 (m, 8H), 5.20 (m, 1H), 4.60 (m, 1H), 2.80 (m, 3H), 2.20 (m, 2H) 1.20 (d, 6H).
91	δ 7.22 (m, 2H), 7.08 (m, 2H), 4.62 (m, 1H), 3.42 (t, 2H), 1.62 (m, 2H), 1.20 (d, 6H), 0.90 (t, 3H).
92	δ 7.40 (m, 2H), 7.12 (m, 2H), 4.64 (m, 1H), 3.42 (t, 2H), 1.62 (m, 2H), 1.20 (d, 6H), 0.90 (t, 3H).
99	δ 7.3 (m, 2H), 7.1 (m, 2H), 4.7 (m, 1H), 4, 1 (m, 1H), 2.4-2.7 (m, 2H), 2.2 (m, 1H), 2.0 (m, 1H), 1.3-1.8 (m 5H), 1.2 (d, 6H).
101	δ 6.87 (t, 2H), 6.52 (dd, 2H), 3.57 (m, 1H), 2.91 (q, 2H), 2.70 (s, 3H), 1.32 (t, 3H), 1.19 (d, 6H).
105	δ 7.40 (d, 2H), 7.20 (d, 2H), 5.80 (m, 1H), 5.30 (m, 2H), 4.04 (d, 2H), 1.20 (d, 6H).
106	δ 7.40-7.08 (m, 9H), 4.40 (m, 3H), 1.20 (d, 6H).
115	δ 7.40 (d, 2H), 7.10 (d, 2H), 4.62 (m, 1H), 3.42 (t, 2H), 1.64 (q, 2H), 1.20 (d, 6H), 0.92 (t, 3H).
126	δ 5.87 (br m, 1H), 4.41 (m, 1H), 4.27 (m, 2H), 3.86 (t, 2H), 2.41 (s, 3H), 2.35 (br m, 2H), 2.25 (s, 3H), 1.32 (d, 6H).
127	δ 7.3 (m, 1H), 6.8-7.0 (m, 2H), 5.7-5.9 (m, 1H), 5.2-5.4 (t, 2H), 4.1 (d, 2H), 3.3 (m, 1H), 1.3 (m, 2H), 0.7 (d, 2H).
128	δ 7.2-7.4 (m, 4H), 7.1 (t, 2H), 4.8 (m, 1H), 4.2 (g, 4H), 4.0 (s, 2H), 1.3 (t, 6H), 1.1 (d, 6H).
129	δ 7.40-7.20 (m, 5H), 4.62 (m, 1H), 3.42 (t, 2H), 1.58 (s, 9H), 1.20 (d, 6H).
130	δ 7.38 (m, 1H), 6.94 (m, 2H), 4.64 (m, 1H), 3.43 (t, 2H), 1.62 (m, 2H), 1.20 (m, 6H), 0.90 (t, 3H).
133	δ 7.40-7.18 (m, 9H), 5.18 (q, 1H), 4.40 (m, 1H), 1.80 (d, 3H), 1.18 (d, 6H).
134	δ 7.40-7.10 (m, 9H), 5.18 (q, 1H), 4.42 (m, 1H), 1.80 (d, 3H), 1.18 (d, 6H).
135	δ 7.27 (m, 2H), 7.11 (t, 2H), 4.69 (m, 1H), 2.92 (m, 1H), 2.76 (m, 1H), 1.32-1.14 (m, 18H).
144	δ 7.40-7.27 (m, 8H), 5.80 (s, 1H), 4.86 (s, 2H), 4.40 (m, 1H), 4.22 (s, 2H), 3.80 (t, 2H), 2.30 (s, 2H), 1.28 (d, 6H).
145	δ 7.40-7.27 (m, 4H), 5.80 (br.s, 1H), 4.86 (s, 2H), 4.30 (m, 1H), 2.38 (m, 1H), 2.16 (m, 4H), 1.90 (m, 1H), 1.70 (m, 2H), 1.26 (d, 6H).
147	δ 5.8 (m, 2H), 5.38 (m, 2H), 4.4 (m, 1H), 4.22 (s, 2H), 4.08 (m, 2H), 3.83 (t, 2H), 2.30 (br.s, 2H), 1.26 (d, 6H).

148	δ 7.22 (m, 2H), 7.10 (m, 2H), 4.40 (m, 1H), 3.80-3.50 (m, 4H), 1.21 (d, 6H).
149	δ 5.72 (s, 1H), 4.40 (m, 1H), 4.28 (s, 2H), 4.16 (m, 2H), 7.10 (m, 2H), 4.40 (m, 1H), 3.80-3.50 (m, 4H), 1.21 (d, 6H).
150	δ 5.82 (s, 1H), 5.38 (m, 2H), 4.18 (d, 2H), 3.72 (br.s, 2H), 3.54 (br.s, 2H), 1.96 (br.s, 4H).
151	δ 7.30 (m, 1H), 6.92 (m, 2H), 5.80 (m, 1H), 5.26 (m, 2H), 4.42 (m, 1H), 4.06 (d, 2H), 1.2 (m, 6H).
152	δ 7.40 (m, 5H), 4.71 (s, 2H), 3.50 (q, 4H), 1.24 (t, 6H).
153	δ 7.31 (m, 10H), 4.61 (s, 2H), 3.43 (s, 3H).
172	δ 7.40 (m, 1H), 6.94 (m, 2H), 4.62 (m, 1H), 4.02 (m, 1H), 3.40 (m, 1H), 1.20 (m, 6H), 0.78 (d, 3H).
174	δ 7.20-7.40 (m, 4H), 5.02 (m, 1H), 4.62 (m, 1H), 1.80 (d, 3H), 1.18 (d, 6H).
178	δ 7.40-7.20 (m, 4H), 4.62 (m, 1H), 3.40 (m, 1H), 1.20 (d, 6H), 0.78 (d, 3H).
180	δ 7.3 (m, 1H), 7.2-7.1 (d, 2H), 5.1-5.0 (m, 1H), 3.99 (s, 6H), 2.22 (s, 6H), 1.46 (d, 6H).
181	δ 7.5-7.1 (m, 4H), 5.1-5.0 (m, 1H), 4.00 (s, 6H), 2.26 (s, 3H), 1.5 (d, 6H).
182	δ 5.0 (m, 1H), 4.3 (m, 1H), 3.97 (s, 6H), 1.5-1.4 (m, 12H).
183	δ 7.3 (m, 2H), 7.0 (m, 1H), 6.8 (m, 2H), 3.9 (m, 1H), 3.4 (m, 5H), 1.9-1.1 (m, 13H).
184	δ 7.2 (m, 2H), 7.1 (m, 2H), 4.6 (m, 1H), 4.1-3.8 (m, 1H), 2.2-1.7 (m, 9H), 1.2 (d, 6H).
188	δ 7.25 (m, 2H), 7.10 (m, 2H), 4.65 (m, 1H), 3.65 (m, 2H), 3.20 (m, 1H), 2.80 (t, 1H), 2.62 (m, 1H), 1.21 (d, 6H).
189	δ 8.6 (m, 2H), 7.2 (m, 2H), 4.69 (s, 2H), 4.3 (m, 1H), 3.5 (bm, 2H), 1.50 (d, 6H), 1.22 (t, 3H).
190	δ 8.97 (s, 1H), 4.6 (q, 2H), 4.4 (m, 1H), 1.5 (m, 9H).
191	δ 7.37 (d, 2H), 7.19 (d, 2H), 4.70 (s, 2H), 4.55-4.67 (m, 1H), 2.61 (s, 3H), 2.42 (s, 3H), 1.20 (d, 6H).
192	δ 7.20-7.25 (m, 2H), 7.04-7.10 (m, 2H), 4.70 (s, 2H), 4.58-4.67 (m, 1H), 2.61 (s, 3H), 2.42 (s, 3H), 1.19 (d, 6H).
196	δ 7.38-7.41 (m, 2H), 7.20-7.23 (m, 2H), 4.62-4.71 (m, 1H), 2.66 (s, 3H), 2.21 (s, 3H), 1.23 (d, 6H).
197	δ 7.41-7.43 (m, 3H), 7.25-7.28 (m, 2H), 4.61-4.74 (m, 1H), 2.65 (s, 3H), 2.19 (s, 3H), 1.24 (d, 6H).
198	δ 7.24-7.28 (m, 2H), 7.11 (t, 2H), 4.61-4.74 (m, 1H), 2.66 (s, 3H), 2.21 (s, 3H), 1.23 (d, 6H).
201	δ 7.4 (m, 3H), 7.2-7.25 (m, 3H), 7.1-7.2 (t, 2H), 4.6-4.8 (m, 1H), 2.3-2.4 (q, 2H), 2.07 (s, 3H), 1.2 (d, 6H), 1.0 (t, 3H).
206	δ 7.40-7.20 (m, 5H), 6.40 (m, 1H), 6.36 (m, 1H), 4.60 (m, 3H), 1.20 (d, 6H).
207	δ 7.40 (s, 1H) 7.20 (m, 2H), 7.18 (m, 2H), 4.60 (m, 3H), 1.20 (d, 6H).
208	δ 7.40 (m, 2H), 6.94 (t, 2H), 6.38 (m, 1H), 6.36 (m, 1H), 4.62 (m, 3H), 1.20 (d, 6H).
210	δ 7.29 (m, 7H), 7.17 (m, 2H), 6.65 (d, 1H), 6.1 (m, 1H), 4.65 (m, 1H), 4.22 (d, 2H), 1.2 (d, 6H).
213	δ 7.23 (m, 2H), 7.09 (m, 2H), 4.65 (m, 1H), 4.24 (s, 2H), 1.2 (d, 6H), 0.14 (s, 9H).
214	δ 7.24 (m, 2H), 7.1 (m, 2H), 6.75 (m, 1H), 5.92 (m, 1H), 4.65 (m, 1H), 4.2 (m, 4H), 1.28 (t, 3H), 1.2 (d, 6H).
215	δ 7.23 (m, 2H), 7.09 (m, 2H), 4.65 (m, 1H), 4.21 (s, 2H), 3.77 (s, 3H), 1.2 (d, 6H).

216	δ 7.27 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 4.38 (s, 2H), 1.21 (m, 15H).
217	δ 7.2 (m, 2H), 7.1 (m, 2H), 4.65 (m, 1H), 4.25 (s, 2H), 2.22 (s, 3H), 1.2 (d, 6H).
218	δ 7.23 (m, 2H), 7.11 (m, 2H), 4.65 (m, 1H), 3.7 (t, 2H), 2.65 (m, 2H), 1.2 (d, 6H).
220	δ 7.23 (m, 2H), 7.09 (m, 2H), 4.65 (m, 1H), 3.68 (m, 4H), 3.55 (m, 2H), 3.44 (m, 2H), 3.31 (s, 3H), 1.2 (d, 6H).
221	δ 7.22 (m, 2H), 7.09 (m, 2H), 4.65 (m, 1H), 3.47 (t, 2H), 1.6 (m, 2H), 1.3 (m, 2H), 1.2 (d, 6H), 0.9 (t, 3H).
222	δ 7.40 (m, 1H), 6.90 (m, 2H), 4.70 (m, 1H), 3.71 (s, 3H), 2.31 (s, 3H), 2.10 (s, 3H), 1.20 (m, 6H).
223	δ 7.26 (m, 2H), 7.15 (m, 4H), 6.70 (m, 1H), 2.33 (s, 3H), 2.15 (s, 3H), 1.20 (m, 6H).
225	δ 7.40 (m, 3H), 7.30 (m, 2H), 4.65 (m, 1H), 2.80 (s, 6H), 1.20 (s, 6H).
229	δ 7.20 (m, 8H), 4.66 (m, 1H), 2.64 (t, 2H), 2.13 (s, 3H), 1.59 (m, 2H), 1.35 (m, 2H), 1.23 (m, 6H), 0.94 (t, 3H).
230	δ 7.40-7.13 (m, 8H), 4.68 (m, 1H), 2.69 (q, 2H), 2.14 (s, 3H), 1.26 (m, 9H).
232	δ 7.37 (m, 3H), 7.20-7.30 (m, 2H), 4.68 (s, 2H), 4.61 (m, 1H), 2.61 (s, 3H), 2.41 (s, 3H), 1.20 (d, 6H).
233	δ 7.37 (dd, 1H), 6.92 (dd, 1H), 4.69 (s, 2H), 4.61 (m, 1H), 2.61 (s, 3H), 2.41 (s, 3H), 1.21 (d, 6H).
236	δ 7.28 (m, 8H), 4.53 (m, 1H), 2.33 (s, 3H), 2.20 (s, 1.5H), 2.07 (s, 1.5H), 1.44 (d, 3H), 1.16 (d, 3H).
238	δ 7.40 (m, 3H), 5.05 (m, 1H), 4.60 (m, 1H), 1.80 (d, 3H), 1.20 (m, 6H).
241	δ 7.37 (d, 2H), 7.19 (d, 2H), 4.61 (m, 1H), 2.65 (m, 1H), 1.119 (d, 6H), 0.97 (m, 4H).
248	δ 7.40 (m, 2H), 7.05 (m, 2H), 4.80 (q, 1H), 4.25 (q, 2H), 3.55 (q, 2H), 1.43 (d, 3H), 1.30 (m, 12H).
251	δ 7.23 (m, 2H), 7.11 (m, 2H), 4.65 (m, 1H), 3.34 (d, 2H), 1.22 (m, 7H), 0.55 (m, 2H), 0.35 (m, 2H).
252	δ 7.22 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 4.25 (s, 2H), 2.48 (q, 2H), 1.19 (d, 6H), 1.1 (t, 3H).
253	δ 7.22 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 3.4 (m, 4H), 1.9-1.19 (m, 34H), 0.88 (m, 7H).
254	δ 7.23 (m, 2H), 7.09 (m, 2H), 4.65 (m, 1H), 4.22 (m, 2H), 2.13 (m.2H), 1.45 (m, 2H), 1.29 (m, 4H), 1 0.88 (m, 3H).
256	δ 7.2 (m, 2H), 7.04 (m, 2H), 4.61 (m, 3H), 3.88 (s, 2H), 1.43 (s, 2H), 0.04 (m, 9H).
257	δ 7.23 (m, 2H), 7.1 (m, 2H), 4.65 (m, 1H), 3.46 (m, 3H), 1.67-0.9 (m, 18H).
258	δ 7.23 (m, 2H), 7.08 (m, 2H), 4.98 (s, 2H), 4.65 (m, 1H), 3.71 (m, 2H), 3.45 (m, 2H), 3.28 (s, 3H), 1.2 (d, 6H).
260	δ 7.75 (d, 2H), 7.6 (t, 1H), 7.45 (t, 2H), 7.2 (m, 2H), 7.05 (m, 2H), 5.38 (q, 1H), 4.65 (m, 1H), 1.73 (d, 3H), 1.19 (d, 6H).
262	δ 7.23 (m, 2H), 7.08 (m, 2H), 5.17 (m, 1H), 5.02 (m, 1H), 4.65 (m, 1H), 4.06 (d, 2H), 2.02 (m, 4H), 1 1.65 (s, 3H), 1.57 (s, 3H), 1.19 (d, 6H).
263	δ 7.22 (m, 2H), 7.1 (m, 2H), 6.75 (m, 1H), 6.92 (m, 1H), 4.65 (m, 1H), 4.22 (m, 2H), 3.74 (s, 3H), 1.2 (d, 6H).
264	δ 7.22 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 4.07 (s, 2H), 3.38 (m, 4H), 1.24-1.14 (m, 12H).

265	δ 7.23 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 4.09 (s, 2H), 1.43 (s, 9H), 1.19 (d, 6H).
266	δ 7.21 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 3.66 (s, 3H), 3.55 (t, 2H), 2.33 (t, 2H), 1.96 (m, 2H), 1.2 (
267	δ 8.53 (m, 1H), 7.76 (m, 1H), 7.25 (m, 6H), 7.08 (t, 2H), 4.76 (s, 2H), 4.66 (m, 1H), 1.19 (d, 6H).
274	δ 3.90 (m, 1H), 3.40 (q, 2H), 2.97 (s, 6H), 1.50 (bm, 15H).
275	δ 3.90 (m, 1H), 3.45 (m, 4H), 1.70 (bm, 10H), 1.00 (s, 9H),
277	δ 7.30 (m, 1H), 6.90 (m, 2H), 4.70 (m, 1H), 3.20 (s, 2H), 1.20 (m, 6H), 0.90 (s, 9H).
279	δ 7.4 (m, 2H), 7.05 (m, 2H), 5.80 (m, 1H), 5.30 (m, 1H), 5.25 (m, 1H), 4.80 (q, 1H), 4.25 (m, 2H), 4.6 (m, 2H), 1.42 (d, 3H), 1.30 (m, 6H).
280	δ 7.4 (m, 2H), 7.05 (m, 2H), 4.80 (q, 1H), 4.25 (q, 2H), 3.75 (m, 1H), 1.00-2.00 (m, 19H).
283	δ 7.40-7.20 (m, 5H), 4.6 (m, 1H), 4.10 (m, 1H), 1.80 (m, 8H), 1.20 (d, 6H).
284	δ 7.40 (m, 1H), 6.80 (m, 2H), 4.6 (m, 1H), 4.10 (m, 1H), 1.80 (m, 8H), 1.20 (d, 6H).
285	δ 7.23 (m, 2H), 7.08 (m, 2H), 5.5 (t, 1H), 4.65 (m, 1H), 4.2 (d, 2H), 2.12 (s, 3H), 1.2 (d, 6H).
286	δ 7.23 (m, 2H), 7.11 (m, 2H), 5.8 (m, 1H), 5.4 (m, 1H), 4.65 (m, 1H), 4.0 (d, 2H), 2.05 (m, 2H), 1.2 (d, 6H), 0.96 (t, 3H).
287	δ 7.21 (m, 2H), 7.09 (m, 2H), 4.65 (m, 1H), 4.54 (t, 1H), 4.38 (t, 1H), 3.65 (t, 2H), 2.05 (m, 2H), 1.2 (d, 6H).
288	δ 7.21 (m, 2H), 7.08 (m, 2H), 5.2 (m, 1H), 4.65 (m, 1H), 4.05 (d, 2H), 1.73 (d, 6H), 1.2 (d, 6H).
289	δ 7.23 (m, 2H), 7.09 (m, 2H), 4.65 (m, 1H), 4.52 (t, 1H), 4.36 (t, 1H), 3.53 (t, 2H), 1.8-1.6 (m, 4H), 1.2 (d, 6H).
290	δ 7.23 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 3.46 (t, 2H), 1.6 (m, 2H), 1.3 (m, 4H), 1.19 (d, 6H), 0.87 (t, 3H).
291	δ 7.22 (m, 2H), 7.09 (m, 2H), 5.72 (m, 1H), 4.99 (m, 2H), 4.65 (m, 1H), 3.48 (t, 2H), 2.05 (q, 2H), 1.7 1.2 (d, 6H).
292	δ 7.38-7.35 (m, 2H), 7.21-7.18 (m, 2H), 4.65 (m, 1H), 2.93 (s, 2H), 1.2 (d, 6H), 0.08 (s, 9H).
293	δ 7.22 (m, 2H), 7.09 (m, 2H), 4.89 (s, 2H), 4.65 (m, 1H), 3.39 (s, 3H), 1.2 (d, 6H).
294	δ 7.23 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 2.93 (s, 2H), 1.2 (d, 6H), 0.08 (s, 9H).
295	δ 7.23 (m, 2H), 7.09 (m, 2H), 4.92 (s, 2H), 4.65 (m, 1H), 3.58 (q, 2H), 1.2 (m, 9H).
296	δ 8.59 (s, 1H), 8.51 (s, 2H), 4.7 (m, 1H), 4.2-4.1 (m, 1H), 1.4-1.3 (m, 12H).
297	δ 3.49 (m, 1H), 2.77 (m, 1H), 1.25 (, 6H), 1.05 (m, 4H).
298	δ 3.9 (m, 1H), 3.41 (q, 2H), 2.79 (m, 1H), 2-1 (m, 17H).
302	δ 7.4 (m, 2H), 7.1 (m, 2H), 4.8 (m, 1H), 4.3 (m, 3H), 1.5-1.2 (m, 12H).
303	δ 7.4 (m, 4H), 7.2-7.3 (m, 1H), 7.1-7.2 (m, 2H), 4.7-4.8 (m, 1H), 2.306 (s, 3H), 1.3-1.4 (m, 9H), 1.2 (m, 3H), 1.1 (m, 3H).
304	δ 7.40 (t, 1H), 7.26 (m, 1H), 7.15 (d, 2H), 7.10 (m, 2H), 4.70 (m, 1H), 2.38 (q, 4H), 1.20 (d, 6H), 1.10 (t, 6H).
308	δ 3.95 (m, 1H), 3.40 (m, 1H), 2.10 (m, 1H), 1.80 ((m, 3H), 1.70-1.20 (m, 6H).

309	δ 4.28 (m, 1H), 3.80 (m, 1H), 3.40 (m, 2H), 1.8 (m, 2H)1.25 (d, 6H), 1.20 (t, 3H).
312	δ 7.40 (m, 1H), 6.42 (s, 1H), 6.40 (s, 1H), 4.74 (s, 2H), 3.84 (M, 1H), 3.40 (m, 2H), 1.80 (4H), 1.20 (t, 3H).
317	δ 7.20 (m, 2H), 7.10 (m, 2H), 4.70 (m, 1H), 3.50 (d, 2H), 3.30 (s, 6H), 1.20 (d, 6H).
323	δ 7.22 (m, 2H), 7.07 (m, 2H), 4.6 (m, 1H), 3.55 (t, 2H), 2.26 (t, 2H), 2.11 (s, 6H), 1.8 (t, 2H), 1.2 (d, 6H)
325	δ 7. 4 (m, 2H), 7.3 (m, 2H), 5.9-5.7 (m, 1H), 5.3-5.2 (m, 2H), 4.1 (d, 2H), 3.7 (q, 1H), 1.3 (d, 3H), 0.7-0.4 (m, 4H), 0.3 (m, 1H).
331	δ 7.4 (m, 2H), 7.30 (t, 1H), 7.05 (t, 2H), 6.95 (d, 1H), 6.90 (d, 1H), 4.80 (q, 1H), 4.25 (q, 2H), 3.75 (s, 3H), 2.12 (s, 3H), 1.45 (s, 3H), 1.30 (t, 6H).
335	δ 8.18 (d, 1H), 8.08 (d, 1H), 7.82 (d, 1H), 7.62-7.44 (m, 6H), 7.20 (m, 1H), 4.60 (m, 1H), 1.20 (br. s, 6H) (In DMSO).
336	δ 8.18-8.00 (m, 2H), 7.60-7.43 (m. 8H), 4.62 (m, 1H), 2.24 (s, 3H), 1.20 (m, 6H) (in DMSO).
337	δ 8.14-8.00 (m, 2H), 7.60-7.20 (m, 7H), 4.62 (m, 1H), 2.20 (s, 3H), 1.20 (s, 6H) (in DMSO).
338	δ 8.12-8.00 (m, 2H), 7.60-7.22 (m, 8H), 4.60 (m, 1H), 2.24 (s, 3H), 1.19 (d, 6H) (in DMSO).
344	δ 8.10-8.00 (m, 2H), 7.60-7.22 (m, 9H), 4.62 (m, 1H), 2.22 (s, 3H), 1.20 (m, 6H) (in DMSO).
345	δ 7.40-7.20 (m, 4H), 5.60 (m, 1H), 5.02 (m, 1H), 4.60 (m, 1H), 4.00 (m, 1H), 3.60 (m, 1H), 3.40 (m, 1H), 1.20 (d, 6H).
352	δ 7.30 (m, 1H), 6.90 (m, 2H), 4.65 (m, 1H), 4.20 (m, 1H), 3.75 (t, 1H), 3.40 (q, 1H), 3.20 (s, 3H), 1.30 (d, 3H), 1.20 (m, 6H).
354	δ
355	δ 7.30 (m, 1H), 6.90 (m, 2H), 4.70 (m, 1H), 3.60 (m, 1H), 2.20 (m, 1H), 1.35 (s, 3H), 1.20 (m, 6H), 0.90 (d, 3H), 0.80 (d, 3H).
356	δ 7.40 (m, 3H), 7.28 (m, 2H), 4.70 (m, 1H), 3.60 (m, 1H), 2.20 (m, 1H), 1.35 (s, 3H), 1.20 (d, 6H), 0.90 (d, 3H), 0.80 (d, 3H).
358	δ 7.20 (m, 2H), 7.10 (m, 2H), 4.70 (m, 1H), 1.90 (m, 2H), 1.70 (m, 2H), 1.20 (d, 6H), 0.80 (t, 6H).
359	δ 7.2-7.4 (m, 2H), 7.15 (m, 2H), 7.0-7.1 (t, 3H), 4.7-4.8 (m, 1H), 2.308 (s, 3H), 1.3-1.4 (m, 12H), 1.16 (s, 3H).
361	δ 7.37 (d, 2H), 7.18 (d, 2H), 4.64 (m, 1H), 1,39 (s, 3H), 1.19 (d, 6H), 1.02 (m, 2H), 0.86 (m, 2H).
362	δ 7.24 (d, 2H), 7.18 (d, 2H), 4.64 (m, 1H), 1,39 (s, 3H), 1.19 (d, 6H), 1.02 (m, 2H), 0.86 (m, 2H).
363	δ 7.37 (d, 1H), 6.92 (m, 2H), 4.64 (m, 1H), 1,39 (s, 3H), 1.19 (d, 6H), 1.02 (m, 2H), 0.86 (m, 2H).
364	δ 7.40 (m, 3H), 7.28 (m, 2H), 4.70 (m, 1H), 3.60 (m, 1H), 1.90 (m, 2H), 1.70 (m, 2H), 1.20 (d, 6H), 0.80 (d, 6H).
365	δ 7.4 (m, 2H), 7.2 (m, 2H), 4.8 (m, 1H), 4.2 (m, 2H), 3.0 (s, 3H), 1.4 (d, 3H), 1.3 (t, 3H).
366	δ 8.61 (m, 2H), 7.70 (br d, 1H), 7.27 (m, 3H), 7.07 (t, 1H), 4.73 (m, 1H), 4.62 (s, 2H), 1.19 (d, 6H).
367	δ 7.23 (m, 2H), 7.11 (m, 2H), 4.67 (m, 1H), 4.2 (m, 1H), 3.93 (m, 1H), 3.6 (m, 1H), 1.48 (d, 3H), 1.18 (d, 6H).

369	δ 7.37 (q, 1H), 7.19 (d, 2H), 4.64 (m, 1H), 2.31 (b, 1H), 1.4-0.77 (m, 12H).
370	δ 7.39 (m, 3H), 7.24 (m, 2H), 4.64 (m, 1H), 2.28 (m, 1H), 1.3-1 (m, 11H), 0.78 (m, 1H).
372	δ 7.37 (q, 1H), 6.92 (m, 2H), 4.64 (m, 1H), 2.31 (m, 1H), 1.4-1.0 (m, 11H), 0.78 (m, 1H).
379	δ 7.38 (m, 3H), 7.22 (m, 2H), 4.83 (s, 2H), 4.62 (m, 1H), 4.46 (q, 2H), 1.41 (t, 3H), 1.21 (d, 6H).
381	δ 7.22 (m, 3H), 7.06 (m, 3H), 4.85 (s, 2H), 4.63 (m, 1H), 4.48 (m, 2H), 1.42 (t, 3H), 1.19 (d, 6H.
387	δ 7.3 (m, 2H), 7.1 (m, 2H), 4.93 (m, 1H), 4.65 (m, 1H), 1.8 (d, 3H), 1.2 (d, 6H).
389	δ 7.23 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 3.46 (t, 2H), 1.6 (m, 2H), 1.26 (m, 6H), 1.2 (d, 6H), 0.86 (t, 3H).
394	δ 7.28 (m, 1H), 6.91 (m, 2H), 4.65 (m, 1H), 3.29 (d, 2H), 2.11 (m, 1H), 1.21 (b, 6H), 0.87 (D, h
399	δ 7.24 (m, 2H), 7.1 (m, 2H), 4.64 (m, 1H), 3.77 (m, 2H), 2.45 (m, 2H), 1.21 (d, 6H).
400	δ 7.21 (m, 2H), 7.09 (m, 2H), 4.65 (m, 1H), 4.47 (q, 1H), 2.19 (s, 3H), 1.67 (d, 3H), 1.2 (d, 6H).
401	δ 7.05-7.24 (m, 4H), 5.37-5.44 (m, 1H), 4.58-4.67 (m, 1H), 2.33 (s, 3H), 1.78 (d, 3H), 1.19 (d, 6H).
408	δ 7.27 (m, 1H), 6.89 (m, 2H), 4.62 (m, 1H), 4.2 (m, 1H), 3.98 (m, 1H), 3.6 (m, 1H), 1.45 (d, 3H), 1.21 (d, 6H).
412	δ 7.20-7.10 (m, 4H), 5.80 (m, 1H), 5.40 (m, 1H), 4.60 (m, 1H), 4.05 (d, 1H), 4.00 (d, 1H), 1.70 (m, 2H), 1.20 (d, 6H).
413	δ 7.20 (m, 2H), 7.10 (m, 2H), 6.00 (m, 1H), 5.20 (m, 2H), 4.60 (m, 2H), 1.50 (d, 3H), 1.20 (d, 6H).
414	δ 7.36 (m, 2H), 7.19 (m, 2H), 6.02 (m, 2H), 5.69 (m, 1H), 4.64 (septet, J = 6.8 Hz, 1H), 2.97 (s, 2H), 1.20 (d, J = 6.8 Hz, 8H), 0.17 (s, 6H).
417	δ 7.38 (m, 2H), 7.17 (m, 2H), 4.65 (m, 1H), 3.29 (d, 2H), 2.01 (m, 1H), 1.21 (d, 6H), 0.88 (d, 6H).
418	δ 7.38 (m, 2H), 7.25 (m, 2H), 4.75 (s, 1H), 4.63 (m, 1H), 4.6 (m, 1H), 3.57 (t, 2H), 2.31 (t, 2H), 1.71 (s, 3H), 1.2 (d, 6H).
419	δ 7.38 (m, 2H), 7.25 (m , 2H), 4.62 (m, 1H), 3.68 (t, 2H), 2.73 (t, 2H), 2.06 (s, 3H), 1.2 (d, 6H).
420	δ 7.38 (m, 3H), 7.25 (m , 2H), 4.53 (d, 2H), 4.31 (d, 2H), 3.67 (s, 3H), 1.27 (s, 3H), 1.2 (d, 6H).
424	δ
425	δ 7.23 (m, 2H), 7.08 (m, 2H), 6.01 (m, 2H), 5.70 (dd, J = 16.5 Hz, J = 7.3 Hz, 1H), 4.65 (septet, J = 6.8 Hz, 1H), 2.97 (s, 2H), 1.19 (d, J = 6.8 Hz, 6H), 0.17 (s, 6H).
426	δ 7.23 (m, 2H), 7.05 (m, 2H), 5.69 (m, 1H), 5.29 (s, 2H), 4.85 (m, 2H), 4.65 (septet, J = 6.8 Hz, 1H), 2.95 (s, 2H), 1.58 (d, J = 8.1 Hz, 2H), 1.19 (d, J = 6.8 Hz, 6H).
427	δ 5.82 (s, 1H), 4.25 (m, 1H), 4.20 (s, 1H), 4.00 (t, 2H), 2.25 (s, 1H), 1.20 (m, 6H).
428	δ 5.78 (s, 1H), 4.25 (m, 1H), 4.00 (m, 1H), 2.25 (m, 1H), 2.20 (m, 4H), 1.20 (d, 6H).
429	δ 4.00 (m, 1H), 3.50 (m, 2H), 3.00 (m, 1H), 2.20 (m, 2H), 1.80 (m, 4H), 1.20 (t, 3H).
432	δ 7.35 (m, 2H), 7.0 (m, 1H), 4.9 (m, 1H), 4.6 (m, 1H), 1.8 (d, 3H), 1.2 (br, 6H).
435	δ 7.4-7.2 (m, 5H), 4.9 (m, 1H), 4.62 (m, 1H), 1.7 (d, 3H), 1.2 (d, 6H).
441	δ 7.3 (m, 3H), 7.2 (m, 3H), 5.0 (m, 1H), 4.6 (m, 1H), 3.2 (s, 3H), 1.6 (d, 3H), 1.1 (d, 6H).

442	δ 7.37 (m, 3H), 7.20 (m, 2H), 5.40 (q, 1H), 4.61 (m, 1H), 2, 62 (s, 3H), 2.30 (s, 3H), 1.76 (d, 3H), 1.20 (d, 6H).
443	δ 7.30 (m, 1H), 6.90 (t, 2H), 5.40 (q, 1H), 4.60 (m, 1H), 2.62 (s, 3H), 2.32 (s, 3H), 1.77 (d, 3H), 1.20 (m, 6H).
446	δ 7.2 (m, 2H), 7.1 (m, 2H), 5.1 (m, 1H), 4.7 (m, 1H), 3.9 (m, 1H), 3.7 (m, 1H), 3.4 (s, 3H), 3.3 (s, 3H), 1.2 (s, 6H).
447	δ 7.4 (m, 3H), 7.3 (m, 2H), 4.6 (m, 1H), 4.1 (m, 4H), 3.8 (d, 2H), 1.2 (m, 12H).
448	δ 7.4 (m, 3H), 7.3 (m, 2H), 4.6 (m, 1H), 4.3 (m, 1H), 4.1 (m, 4H), 1.6 (m, 6H), 1.2 (m, 12H).
452	δ 7.2 (m, 2H), 7.1 (m, 2H), 6.1-5.2 (m, 3H), 4.7 (m, 1H), 3.6 (m, 1H), 3.4 (s, 3H), 3.4 (s, 3H), 1.2 (d, 6H).
453	δ 7.21 (m, 2H), 7.08 (m, 2H), 4.6 (m, 1H), 3.99 (t, 2H), 3.36 (t, 2H), 2.97 (s, 3H), 1.18 (d, 6H).
454	δ 7.39 (m, 3H), 7.26 (m, 2H), 5.8 (m, 1H), 5.38 (m, 1H), 4.68 (m, 1H), 3.99 (d, 2H), 2.0 (m, 2H), 1.2 (d, 6H), 0.95 (t, 3H).
455	δ 7.39 (m, 3H), 7.26 (m, 2H), 6.0 (m, 1H), 5.2 (dd, 2H), 4.65 (m, 1H), 4.2 (m, 1H), 1.9 (m, 2H), 1.21 (d, 6H), 0.83 (t, 3H).
456	δ 7.39 (m, 2H), 7.20 (m, 2H), 4.65 (m, 1H), 4.2 (m, 1H), 3.91 (m, 1H), 3.6 (dd, 1H), 1.46 (d, 3H), 1.21 (d, 6H).
457	δ 7.4 (m, 3H), 7.2 (m, 2H), 5.0 (s, 2H), 4.5-4.0 (br, 1H), 1.6 (m, 1H), 1.2 (d, 6H).
458	δ 7.3 (m, 2H), 7.1 (m, 2H), 5.1 (m, 1H), 4.7 (m, 1H), 4.1 (m, 1H), 3.8 (m, 1H), 3.4 (s, 3H), 1.2 (d, 6H).
461	δ 7.27 (m, 2H), 7.11 (m, 2H), 4.68 (m, 1H), 3.46 (t, 2H), 1.64 (m, 2H), 1.22 (d, 6H), 0.44 (m, 2H), 0.00 (s, 9H).
463	δ 7.3-7.4 (q, 1H), 6.8-7.0 (m, 2H), 4.6-4.7 (m, 2H), 3.73 (s, 3H), 1.6 (d, 3H), 1.2 (d, 6H).
464	δ 7.4 (m, 3H), 7.2 (m, 2H), 4.6-4.7 (m, 2H), 3.727 (s, 3H), 1.6 (d, 6H), 1.3 (d, 3H).
465	δ 7.3-7.4 (m, 1H), 6.8-7.0 (m, 2H), 4.6-4.7 (m, 1H), 4.1-4.3 (m, 3H), 3.5-3.9 (m, 1H), 3.0-3.3 (m, 1H), 2.2-2.5 (m, 1H), 1.2 (m, 12H).
467	δ 7.39 (m, 2H), 7.22 (m, 2H), 4.93 (s, 2H), 4.66 (septet, J = 6.8 Hz, 1H), 3.62 (apparent t, J = 8.3 Hz, 2H), 1.22 (d, J = 6.8 Hz, 6H), 0.93 (apparent t, J = 8.3 Hz, 2H), 0.00 (s, 9H).
472	δ 7.35 (m, 1H), 7.00 (m, 2H), 4.70 (m, 1H), 4.00 (m, 1H), 3.38 (s, 3H), 3.23 (s, 3H), 1.35 (d, 3H), 1.20 (m, 6H).
478	δ 1.18 (d, 6H), 1.68 (d, 3H), 2.95 (s, 3H) 2.98 (s, 3H), 4.64 (m, 1H), 4.83 (q, 1H) 7.05 (m, 2H), 7.22 (m, 2H).
479	δ 1.20 (d, 6H), 1.66 (d, 3H), 2.94 (s, 3H), 2.96 (s, 3H), 4.65 (m, 3H), 4.82 (q, 1H), 7.21 (m, 2H), 7.38 (m, 2H).
481	δ 1.20 (m, 6H), 1.68 (d, 3H), 2.94 (s, 3H), 2.99 (s, 3H), 4.64 (m, 1H), 4.82 (q, 1H), 6.89 (m, 2H), 7.33 (m, 1H).
485	δ 7.39 (m, 3H), 7.24 (m, 2H), 4.64 (m, 1H), 4.3 (s, 2H), 2.64 (m, 1H) 1.21 (d, 6H), 1.16 (d, 6H).
486	δ 7.34 (q, 1H), 6.93 (m, 2H), 4.64 (m, 1H), 4.3 (s, 2H), 2.64 (m, 1H), 1.22 (b, 6H), 1.16 (d, 6H).

487	δ 7.37 (d, 2H), 7.18 (d, 2H), 4.64 (m, 1H), 2.65 (m, 1H), 1.19 (m, 12H).
488	δ 7.20 (m, 2H), 7.09 (m, 2H), 4.64 (m, 1H), 4.43 (s, 2H), 1.92 (m, 1H), 1.19 (m, 8H), 1.04 (m, 2H).
490	δ 7.34 (m, 1H), 6.95 (m, 2H), 4.64 (m, 1H), 4.42 (s, 2H), 1.92 (m, 1H), 1.22 (m, 8H), 1.03 (m, 2H).
491	δ 9.53 (s, 1H), 7.24 (m, 2H), 7.1 (m, 2H), 4.64 (m. 1H), 4.35 (s, 2H), 1.2 (b, 6H).
492	δ 7.3-7.2 (m, 2H), 7.1 (m, 2H), 6.1 (bs, 1H), 4.7 (m, 1H), 4.14 (s, 2H), 3.7-3.6 (m, 4H), 1.20 (d, 6H).
493	δ 7.3-7.2 (m, 2H), 7.1 (m, 2H), 5.9 (bs, 1H), 4.7-4.6 (m, 1H), 4.09 (s, 2H), 3.6-3.5 (t, 2H), 3.5 (dt, 2H), 2.0 (m, 2H), 1.20 (d, 6H).
494	δ 7.4 (m, 3H), 7.3-7.2 (m, 2H), 4.7 (m, 1H), 4.14 (t, 2H), 4.02 (s, 2H), 3.3 (t, 2H), 1.9-1.8 (m, 2H), 1.21 (d, 6H).
495	δ 7.4 (m, 3H), 7.3-7.2 (m, 2H), 4.7-4.6 (m, 1H), 4.3 (t, 2H), 4.24 (s, 2H), 3.9-3.8 (t, 2H), 1.21 (d, 6H).
496	δ 7.4-7.3 (m, 3H), 7.2-7.1 (m, 2H), 5.6 (bs, 1H), 4.7-4.6 (m, 1H), 3.9 (s, 2H), 2.0 (bs, 2H), 1.9 (bs, 2H), 1.6-1.4 (m, 4H), 1.2 (d, 6H).
497	δ 7.3 (m, 3H), 7.2 (m, 2H), 5.8 (s, 1H), 4.7-4.6 (m, 1H), 3.94 (s, 2H), 2.7 (m, 2H), 2.4 (m, 2H), 2.2 (b, 2H), 1.2 (d, 6H).
498	δ 8.7-8.6 (bs, 1H), 8.5 (bs, 1H), 7.7 (m, 1H), 7.4-7.2 (m, 6H), 5.5 (s, 1H), 5.3 (s, 1H), 4.7-4.6 (m, 1H), 4.45 (s, 2H), 1.2 (d, 6H).
500	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.64 (m, 1H), 4.48 (d of t, 2H), 3.65 (t, 2H), 2.42 (m, 2H), 1.2 (m, 6H).
501	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.87 (m, 1H), 4.64 (m, 1H), 3.86 (m, 2H), 3.77 (m, 2H), 3.64 (t, 2H), 2.05 (m, 2H), 1.2 (m, 6H).
502	δ 7.4 (m, 1H), 6.9 (m, 2H), 4.64 (m, 1H), 4.57 (m, 1H), 3.97 (m.2H), 3.63 (m, 4H), 1.97 (m, 3H), 1.2 (m, 7H).
503	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.88 (s, 2H), 4.64 (m, 1H), 3.93 (s, 3H), 1.2 (m, 6H).
504	δ 7.4 (m, 1H), 6.9 (m, 2H), 4.92 (s, 2H), 4.65 (m, 1H), 3.59 (q, 2H), 1.2 (m, 9H).
505	δ 7.4 (m, 1H), 6.9 (m, 2H), 4.97 (s, 2H), 4.63 (m, 1H), 3.72 (m, 2H), 3.45 (m, 2H), 3.30 (s, 3H), 1.2 (m, 6H).
506	δ 7.4 (m, 1H), 6.9 (m, 2H), 4.63 (m, 1H), 4.05 (m, 2H), 3.51 (m, 2H), 2.04 (s, 3H), 1.67 (m, 4H), 1.2 (m, 6H).
507	δ 7.35 (m, 2H), 6.92 (m, 2H), 4.64 (m, 1H), 3.7 (t, 2H), 2.65 (m, 2H), 1.23 (br s, 6H).
508	δ 7.3 (m, 4H), 7.1 (m, 2H), 6.9 (m, 2H), 4.62 (m, 1H), 3.69 (m, 2H), 2.92 (m, 2H), 1.2 (m, 6H)
509	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.65 (m, 1H), 3.33 (m, 2H), 1.2 (m, 7H), 0.54 (m, 2H), 0.33 (m, 2H)
510	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.63 (m, 1H), 4.37 (s, 2H), 2.43 (s, 3H), 2.24 (s, 3H), 1.2 (m, 6H).
511	δ 7.75 (d, 2H), 7.6 (t, 1H), 7.45 (t, 2H), 7.3 (m, 1H), 6.89 (m, 2H), 5.37 (q, 1H), 4.65 (m, 1H), 1.72 (d, 3H), 1.2 (br s, 6H).
512	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.65 (m, 1H), 4.23 (s, 2H), 3.36 (q, 2H), 3.26 (q, 2H), 1.21 (m, 9H), 1.11 (t, 3H).
513	δ 7.35 (m, 1H), 6.92 (m, 2H), 4.65 (m, 1H), 3.66 (s, 3H), 3.53 (t, 2H), 2.31 (t, 2H), 1.96 (m, 2H), 1.22 (br s, 6H).

514	δ .35 (m, 1H), 6.92 (m, 2H), 5.55 (t, 1H), 4.65 (m, 1H), 4.2 (d, 2H), 2.12 (s, 3H), 1.21 (br s, 6H). (3:1 cis/trans mix.)
515	δ 7.35 (m, 1H), 6.92 (m, 2H), 5.2 (t, 1H), 4.65 (m, 1H), 4.04 (d, 2H), 1.72 (m, 6H), 1.21 (br s, 6H).
516	δ 7.35 (m, 1H), 6.92 (m, 2H), 5.73 (m, 1H), 5.0 (m, 2H), 4.65 (m, 1H), 3.48 (t, 2H), 2.04 (q, 2H), 1.74 1.22 (br s, 6H).
517	δ 7.32 (m, 1H), 6.91 (m, 2H), 4.65 (m, 1H), 4.48 (q, 1H), 2.19 (s, 3H), 1.65 (d, 3H), 1.22 (br s, 6H).
518	δ 7.35 (m, 1H), 6.89 (m, 2H), 4.65 (m, 1H), 2.93 (s, 2H), 1.21 (br s, 6H), 0.08 (m, 9H).
519	δ 7.37 (m, 1H), 6.92 (m, 2H), 5.1 (s, 1H), 4.87 (s, 2H), 4.65 (m, 1H), 4.13 (q, 2H), 3.78 (q, 2H), 1.23 (
520	δ 7.3 (m, 6H), 6.9 (m, 2H), 4.98 (s, 2H), 4.6 (m, 3H), 1.21 (br s, 6H).
521	δ 7.35 (m, 1H), 6.9 (m, 2H), 4.64 (m, 1H), 3.5 (d, 2H), 2.65 (m, 1H), 2.0-1.7 (m, 6H), 1.21 (br s, 6H).
522	δ 7.35 (m, 1H), 6.92 (m, 2H), 4.65 (m, 1H), 4.52 (t, 1H), 4.36 (t, 1H), 3.53 (t, 2H), 1.85-1.6 (m, 4H), 1.22 (br s, 6H).
523	δ 7.35 (m, 1H), 6.9 (m, 2H), 5.8 (m, 1H), 5.4 (m, 1H), 4.65 (m, 1H), 4.0 (d, 2H), 2.03 (m, 2H), 1.21 (br s, 6H), 0.94 (t, 3H)
524	δ 7.32 (m, 1H), 6.92 (m, 2H), 4.65 (m, 1H), 4.24 (s, 2H), 2.47 (q, 2H), 1.21 (br s, 6H), 1.1 (t, 3H).
525	δ 7.33 (m, 1H), 6.93 (m, 2H), 4.65 (m, 1H), 3.75 (t, 2H), 2.48 (m, 2H), 1.22 (br s, 6H).
526	δ 7.33 (m, 1H), 6.93 (m, 2H), 4.65 (m, 1H), 3.55 (t, 2H), 2.1 (m, 2H), 1.92 (m, 2H), 1.23 (br s, 6H)
527	δ 7.39 (m, 2H), 7.22 (m, 2H), 4.93 (s, 2H), 4.66 (septet, J = 6.8 Hz, 1H), 3.62 (apparent t, J = 8.3 Hz, 2H), 1.22 (d, J = 6.8 Hz, 6H), 0.93 (apparent t, J = 8.3 Hz, 2H), 0.00 (s, 9H).
528	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 3.5 (t, 2H), 1.6 (m, 2H), 1.3 (m, 4H), 1.1 (d, 6H), 0.875 (t, 3H).
529	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 3.4 (t, 2H), 1.6 (m, 2H), 1.26 (brd s, 6H), 1.1 (d, 6H), 0.865 (t, 3H).
530	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 4.5 (t, 1H), 4.4 (t, 1H), 3.6 (t, 2H), 1.9-2.1 (m, 2H), 1.2 (d, 6H).
531	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.875 (m, 1H), 4.6-4.7 (m, 1H), 3.7-3.9 (m, 4H), 3.648 (t, 2H), 2.046 (m, 2H), 1.1 (d, 6H).
532	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 4.561 (m, 1H), 3.9-4.0 (m, 2H), 3.6 (m, 4H), 1.9-2.0 (m, 3H), 1.3 (brd s, 1H), 1.1 (d, 6H).
533	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.886 (s, 2H), 4.6-4.7 (m, 1H), 3.394 (s, 3H), 1.2 (d, 6H).
534	δ 7.4 (d, 2H), 7.2 (d, 2H), 4.922 (s, 2H), 4.6-4.7 (m, 1H), 3.6 (q, 2H), 1.1-1.2 (m, 9H).
535	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.977 (s, 2H), 4.6-4.7 (m, 1H), 3.708 (m, 2H), 3.470 (m, 2H), 3.277 (s, 3H), 1.2 (d, 6H).
536	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 4.056 (t, 2H), 3.508 (t, 2H), 2.039 (s, 3H), 1.6-1.8 (m, 4H), 1.2 (d, 6H).
537	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 3.7 (t, 2H), 2.6-2.8 (m, 2H), 1.2 (d, 6H).

538	δ 7.3 (d, 2H), 7.238 (m, 2H), 7.166 (m, 1H), 7.0-7.1 (m, 4H), 4.6-4.7 (m, 1H), 3.7 (t, 2H), 2.9 (t, 2H), 1.2 (d, 6H).
539	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 3.3 (d, 2H), 1.2 (d, 6H), 1.1-1.2 (m, 1H), 0.56 (q, 2H), 0.3 (q, 2H).
540	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 4.369 (s, 2H), 2.436 (s, 3H), 2.245 (s, 3H), 1.1 (d, 6H).
541	δ 7.77 (d, 2H), 7.6 (t, 1H), 7.4 (t, 2H), 7.3 (d, 2H), 7.1 (d, 2H), 5.3-5.4 (q, 1H), 4.6-4.7 (m, 1H), 1.7 (d, 3H), 1.1 (d, 6H).
542	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 4.230 (s, 2H), 3.4 (q, 2H), 3.2-3.2 (q, 2H), 1.239 (t, 3H), 1.2 (d, 6H), 1.1 (t, 3H).
543	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 3.658 (s, 3H), 3.5 (t, 2H), 2.3-2.4 (t, 2H), 1.9-2.0 (m, 2H), 1.3 (d, 6H).
544	δ 7.3 (d, 2H), 7.1 (d, 2H), 5.5 (t, 1H), 4.6-4.7 (m, 1H), 4.2 (d, 2H), 2.1 (s, 3H), 1.1 (d, 6H) (3:1 cis/trans mixture).
545	δ 7.3 (d, 2H), 7.1 (d, 2H), 5.2 (t, 1H), 4.6-4.7 (m, 1H), 4.0 (d, 2H), 1.735 (s, 3H), 1.719 (s, 3H), 1.1 (d, 6H).
546	δ 7.3 (d, 2H), 7.1 (d, 2H), 5.6-5.8 (m, 1H), 4.9 (m, 2H), 4.6-4.7 (m, 1H), 3.4 (t, 2H), 2.0-2.1 (q, 2H), 1.7-1.8 (m, 2H), 1.2 (d, 6H).
547	δ 7.4-7.37 (m, 2H), 7.19-7.16 (m, 2H), 4.65 (m, 1H), 4.48 (q, 1H), 2.19 (s, 3H), 1.66 (d, 3H), 1.2 (d, 6H).
548	δ 7.38-7.35 (m, 2H), 7.21-7.18 (m, 2H), 4.65 (m, 1H), 2.93 (s, 2H), 1.2 (d, 6H), 0.08 (s, 9H).
549	δ 7.4 (d, 2H), 7.2 (d, 2H), 5.1 (s, 1H), 4.9 (s, 2H), 4.6-4.7 (m, 1H), 4.1-4.2 (q, 2H), 3.7-3.8 (q, 2H), 1.3 (t, 3H), 1.1-1.2 (m, 9H).
550	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 3.4-3.5 (d, 2H), 2.6-2.7 (m, 1H), 2.0-2.1 (m, 2H), 1.8-1.9 (q, 2H), 1.1 (d, 6H).
551	δ 7.3 (d, 2H), 7.1 (d, 2H), 4.6-4.7 (m, 1H), 4.5 (t, 1H), 4.3-4.4 (t, 1H), 3.5 (t, 2H), 1.6-1.8 (m, 4H), 1.2 (d, 6H).
552	δ 7.3 (d, 2H), 7.1 (d, 2H), 5.7-5.9 (m, 1H), 5.3-5.5 (m, 1H), 4.6-4.7 (m, 1H), 4.0 (d, 2H), 2.0-2.1 (m, 2H), 1.1 (d, 6H), 0.9 (t, 3H).
553	δ 7.4 (d, 2H), 7.2 (d, 2H), 4.6-4.7 (m, 1H), 4.244 (s, 2H), 2.4 (q, 2H), 1.2 (d, 6H), 1.087 (t, 3H).
554	δ 7.4 (d, 2H), 7.2 (d, 2H), 4.6-4.7 (m, 1H), 3.7 (t, 2H), 2.4-2.6 (m, 2H), 1.2 (d, 6H).
555	δ 7.4 (d, 2H), 7.2 (d, 2H), 4.6-4.7 (m, 1H), 3.5 (t, 2H), 2.0-2.2 (m, 2H), 1.8-2.0 (m, 2H), 1.1 (d, 6H).
556	δ 7.39 (m, 3H), 7.3 (m, 2H), 4.6-4.7 (m, 1H), 3.45 (t, 2H), 1.56 (m, 2H), 1.3 (m, 2H), 1.2 (d, 6H), 0.9 (t, 3H).
557	δ 7.38 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 3.44 (t, 2H), 1.6 (m, 2H), 1.3 (m, 4H), 1.2 (d, 6H), 0.86 (t, 3H).
558	δ 7.387 (m, 3H), 7.38 (m, 2H), 4.6-4.7 (m, 1H), 3.44 (t, 2H), 1.6 (m, 2H), 1.25 (d, 6H), 1.2 (s, 6H), 0.859 (t, 3H).
559	δ 7.4 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 4.53 (t, 1H), 4.37 (t, 1H), 3.61-3.66 (t, 2H), 1.9-2.1 (m, 2H), 1.2 (d, 6H).

560	δ 7.37 (m, 3H), 7.26 (m, 2H), 4.87 (t, 1H), 4.6-4.7 (m, 1H), 3.8-3.9 (m, 2H), 3.7-3.8 (m, 2H)m 3.63 (t, 2H), 2.045 (m, 2H), 1.2 (d, 6H).
561	δ 7.3 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 4.56 (t, 1H), 3.9-4.0 (m, 2H), 3.6 (m, 4H), 1.9 (m, 3H), 1.259 (t, 1H), 1.2 (d, 6H).
562	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.87 (s, 2H), 4.6-4.7 (m, 1H), 3.377 (s, 3H), 1.2 (d, 6H).
563	δ 7.3 (m, 3H), 7.27 (m, 2H), 4.886 (s, 2H), 4.6-4.7 (m, 1H), 3.547-3.571 (q, 2H), 1.2 (d, 6H), 1.129-1.15 (t, 3H).
564	δ 7.38 (m, 3H), 7.26 (m, 2H), 4.966 (s, 2H), 4.6-4.7 (m, 1H), 3.7 (t, 2H), 3.4 (t, 2H), 3.257 (s, 3H), 1.2 (d, 6H).
565	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 4.046 (t, 2H), 3.495 (t, 2H), 2.033 (s, 3H), 1.6-1.8 (m, 4H), 1.2 (d, 2H).
566	δ 7.38 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 3.66-3.707 (t, 2H), 2.6-2.7 (m, 2H), 1.2 (d, 6H).
567	δ 7.38 (m, 3H), 7.24 (m, 5H), 7.12 (d, 2H), 4.63 (m, 1H), 3.67 (t, 2H), 2.9 (t, 2H), 1.2 (d, 6H).
568	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 3.3 (d, 2H), 1.2 (d, 6H), 1.1 (m, 1H), 0.5 (q, 2H), 0.3 (q, 2H).
569	δ 7.38 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 4.353 (s, 2H), 2.422 (s, 3H), 2.225 (s, 3H), 1.2 (d, 6H).
570	δ 7.759 (d, 2H), 7.438 (t, 1H), 7.374 (t, 3H), 7.37 (m, 2H), 7.26 (m, 2H), 5.3-5.4 (q, 1H), 4.6-4.7 (m, 1H), 1.7 (d, 3H), 1.2 (d, 6H).
571	δ 7.37 (m, 3H), 7.25 (m, 2H), 4.6-4.7 (m, 1H), 4.2 (s, 2H), 3.2-3.3 (q, 2H), 3.3-3.4 (q, 2H), 1.2 (m, 9H), 1.1 (t, 3H).
572	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 3.6 (s, 3H), 3.54 (t, 2H), 2.3 (t, 2H), 1.9 (m, 2H), 1.2 (d, 6H).
573	δ 7.39 (m, 3H), 7.26 (m, 2H), 5.5 (t, 1H), 4.6-4.7 (m, 1H), 4.2 (d, 2H), 2.1 (s, 3H), 1.2 (d, 6H).
574	δ 7.39 (m, 3H), 7.26 (m, 2H), 5.1-5.2 (t, 1H), 4.6-4.7 (m, 1H), 4.01-4.039 (d, 2H), 1.7 (d, 6H), 1.2 (d, 6H).
575	δ 7.39 (m, 3H), 7.26 (m, 2H), 5.6-5.8 (m, 1H), 4.9-5.1 (m, 2H), 4.6-4.7 (m, 1H), 3.44-3.49 (t, 2H), 2.0-2.1 (q, 2H), 1.7-1.8 (m, 2H), 1.2 (d, 6H).
576	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 4.4-4.5 (q, 1H), 2.166 (s, 3H), 1.6 (d, 2H), 1.2 (d, 6H).
577	δ 7.37 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 2.9 (s, 2H), 1.2 (d, 6H), 0.6-0.8 (m, 9H).
578	δ 7.4 (m, 3H), 7.26 (m, 2H), 5.1 (s, 1H), 4.862-4.866 (s, 2H), 4.6-4.7 (m, 1H), 4.1-4.2 (q, 2H), 3.7-3.8 (q, 2H), 1.17-1.28 (m, 12H).
579	δ 7.4-7.2 (m, 10H), 4.97 (s, 2H), 4.63 (m, 1H), 4.58 (s, 2H), 1.2 (d, 6H).
580	δ 7.38 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 3.47-3.49 (d, 2H), 2.6-2.7 (m, 1H), 1.9-2.1 (m, 2H), 1.8-1.9 (q, 2H), 1.7-1.8 (q, 2H), 1.2 (d, 6H).
581	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 4.5 (t, 1H), 4.3-4.4 (t, 1H), 3.5 (t, 2H), 1.7-1.8 (m, 3H), 1.6-1.7 (m, 1H), 1.2 (d, 6H).

582	δ 7.38 (m, 3H), 7.26 (m, 2H), 5.7-5.9 (m, 1H), 5.3-5.4 (m, 1H), 4.6-4.7 (m, 1H), 4.0 (d, 2H), 1.9-2.1 (m, 2H), 1.2 (d, 6H), 0.9-1.0 (t, 3H).
583	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 4.23 (s, 2H), 2.45-2.48 (q, 2H), 1.2 (d, 6H), 1.1 (t, 3H).
584	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.6-4.7 (m, 1H), 3.7 (t, 2H), 2.4-2.6 (m, 2H), 1.2 (d, 6H).
585	δ 7.3 (m, 2H), 7.1 (m, 2H), 4.6-4.7 (m, 1H), 3.5 (t, 2H), 2.0-2.2 (m, 2H), 1.8-2.0 (m, 2H), 1.2 (d, 6H).
587	δ 7.4 (m, 3H), 7.3 (m, 2H), 4.6 (m, 1H), 4.1 (m, 4H), 3.8 (d, 2H), 1.2 (m, 12H).
592	δ 7.4 (m, 2H), 7.2 (m, 2H), 5.1 (m, 1H), 4.7 (m, 1H), 3.3 (s, 3H), 1.7 (d, 3H), 1.2 (d, 6H).
593	δ 7.3 (m, 1H), 6.9 (m, 2H), 5.1 (m, 1H), 4.7 (m, 1H), 3.3 (s, 3H), 1.7 (d, 3H), 1.2 (m, 6H).
594	δ 7.28 (m, 1H), 6.92 (m, 2H), 4.6 (m, 1H), 4.2 (m, 1H), 3.8 (m, 1H), 3.4 (m, 1H), 1.31 (d, 3H), 1.26 (d, 6H).
596	δ 7.22 (m, 2H), 7.09 (m, 2H), 4.65 (m, 1h), 4.4 (m, 2H), 4.2-3.6 (m, 3H), 2.04 (s, 3H), 1.21 (d, 6H).
597	δ 7.39 (m, 2H), 7.16 (m, 2H), 4.6 (m, 1H), 4.2-3.6 (m, 2H), 1.22 (d, 6H).
598	δ 7.28 (m, 1H), 6.9 (m, 2H), 4.63 (m, 1H), 3.8 (s, 2H), 1.26 (b, 6H).
599	δ 7.4 (d, 2H), 7.20 (d, 2H), 4.65 (m, 1H), 4.12 (q, 4H), 4.80 (d, 2H), 1.30 (m, 12H).
600	δ 7.11 (m, 3H), 5.80 (m, 1H), 5.22 (m, 3H), 4.03 (d, 2H), 3.90 (m, 2H), 3.26 (s, 3H), 2.35 (d, 6H), 1.41 (d, 3H).
603	δ 7.38-7.41 (m, 3H), 7.21-7.25 (m, 2H), 4.82-4.89 (m, 1H), 4.59-4.68 (m, 1H), 4.08-4.16 (m, 1H), 3.68-3.74 (m, 1H), 1.57 (d, 3H), 1.21 (d, 6H).
604	δ 7.29-7.37 (m, 1H), 6.90-6.96 (m, 2H), 4.83-4.90 (m, 1H), 4.58-4.67 (m, 1H), 4.09-4.17 (m, 1H), 3.68-3.74 (m, 1H), 1.58 (d, 3H), 1.22 (br s, 6H).
605	δ 7.6 (m, 1H), 7.48 (m, 1H), 7.3 (m, 3H), 7.2 (m, 3H), 5.94 (s, 1H), 5.3 (s, 1H), 4.6 (m, 3H), 1.2 (d, 6H).
606	δ 7.4-7.2 (m, 7H), 6.9 (m, 2H), 5.4 (s, 1H), 5.1 (s, 1H), 4.7-4.6 (m, 1H), 4.4 (s, 2H), 1.2 (d, 6H).
607	δ 7.4 (m, 3H), 7.3-7.2 (m, 2H), 4.9 (s, 1H), 4.8 (s, 1H), 4.7-4.6 (m, 1H), 3.9 (s, 2H), 1.7 (s, 3H), 1.2 (d, 6H).
608	δ 7.4 (m, 3H), 7.2 (m, 2H), 5.4 (s, 2H), 4.7-4.6 (m, 1H), 4.2 (s, 2H), 1.2 (d, 6H).
609	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.82 (m, 1H), 4.64 (m, 1H), 2.41 (s, 1H), 1.60 (d, 3H), 1.22 (d, 6H).
614	δ 7.4 (m, 3H), 7.2 (m, 2H), 4.6-4.7 (m, 1H), 4.0-4.2 (4H), 5.0 (m, 1H), 3.9 (m, 1H), 3.0-3.2 (q of q, 2H), 1.2 (m, 16H).
615	δ 7.2 (m, 2H), 7.0-7.1 (t, 2H), 5.7 (m, 1H), 4.6 (m, 1H), 4.2 (m, 2H), 3.9 (m, 2H), 3.0-3.2 (m, 2H), 1.1-1.3 (m, 14H).
616	δ 7.2-7.3 (m, 2H), 7.0-7.1 (m, 2H), 4.6-4.7 (m, 2H), 3.7 (s, 3H), 1.66 (d, 3H), 1.2 (d, 6H).
617	δ 7.3 (m, 2H), 7.1 (m, 2H), 4.6 (m, 1H), 4.3 (m, 1H), 4.1 (m, 4H), 1.6 (m, 6H), 1.2 (m, 12H).
623	δ 7.4 (d, 2H), 7.2 (d, 2H), 4.6-4.7 (m, 2H), 3.742 (s, 3H), 1.6 (d, 3H), 1.2 (d, 6H).

627	δ 7.20 (m, 2H), 7.10 (m, 2H), 4.70 (m, 2H), 3.70 (m, 2H), 3.60 (t, 2H), 3.55 (t, 2H), 3.30 (s, 3H) 1.20 (d, 6H).
629	δ 7.20 (m, 2H), 7.10 (m, 2H), 4.70 (m, 2H), 3.70 (m, 2H), 3.60 (d, 2H), 3.45 (m, 2H), 1.20 (d, 6H), 1.10 (t, 6H).
631	δ 7.35 (m, 3H), 7.28 (m, 2H), 4.70 (m, 1H), 3.65 (t, 2H), 3.54 (t, 2H), 3.30 (s, 3H), 1.22 (d, 6H).
632	δ 7.35 (m, 3H), 7.28 (m, 2H), 4.70 (m, 2H), 3.65 (m, 2H), 3.55 (d, 2H), 3.48 (m, 2H), 1.20 (d, 6H), 1.10 (d, 6H).
634	δ 7.3 (m, 1H), 6.92 (m, 2H), 5.43 (s, 2H), 4.65 (m, 1H), 4.23 (s, 2H), 1.21 (bs, 6H).
635	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.62 (m, 1H), 3.46 (t, 2H), 1.56 (m, 2H), 1.2 (m, 8H), 0.91 (t, 3H).
636	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.64 (m, 1H), 3.45 (t, 2H), 1.64 (m, 2H), 1.2 (m, 10H), 0.87 (t, 3H).
637	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.63 (m, 1H), 3.45 (t, 2H), 1.6 (m, 2H), 1.2 (m, 12H), 0.86 (t, 3H).
639	δ 7.37 (d, 2H), 7.17 (d, 2H), 4.64 (m, 1H), 4.43 (s, 2H), 1.91 (m, 1H), 1.2 (m, 8H), 1.04 (m, 2H).
640	δ 7.21 (m, 2H), 7.09 (m, 2H), 4.65 (m, 1H), 4.19 (s, 2H), 3.3 (m, 1H), 2.4-1.8 (m, 6H), 1.21 (d, 6H).
642	δ 7.34 (m, 1H), 6.94 (m, 2H), 4.65 (m, 1H), 4.19 (s, 2H), 3.3 (m, 1H), 2.4-1.8 (m, 6H), 1.21 (d, 6H).
643	δ 7.37 (d, 2H), 7.17 (d, 2H), 4.65 (m, 1H), 4.19 (s, 2H), 3.3 (m, 1H), 2.4-1.8 (m, 6H), 1.21 (d, 6H).
648	δ 7.3 (m, 2H), 7.2 (m, 3H), 5.0 (s, 1H), 4.8-4.6 (m, 1H), 4.5 (s, 1H), 4.0 (s, 2H), 1.2 (d, 6H).
649	δ 7.3 (m, 3H), 7.2 (m, 2H), 4.9 (s, 1H), 4.8 (s, 1H), 4.7-4.6 (m, 1H), 4.0 (s, 2H), 2.3-2.1 (m, 1H), 1.2 (d, 6H), 1.0 (d, 6H).
650	δ 7.4-7.0 (m, 10H), 5.0 (ABm, 2H), 4.7-4.6 (m, 1H), 3.9 (s, 2H), 3.3 (s, 2H), 1.2 (d, 6H).
651	δ 7.3 (m, 3H), 7.2 (m, 2H), 6.5 (s, 1H), 5.9 (s, 1H), 5.0 (m, 1H), 4.7-4.6 (m, 1H), 3.66 (s, 3H), 1.5 (d, 3H), 1.2 (d, 6H).
652	δ 7.3 (m, 3H), 7.2 (m, 2H), 5.6 (m, 1H), 5.4 (m, 1H), 4.7-4.6 (m, 1H), 2.4 (s, 1H), 1.73 (s, 3H), 1.69 (s, 3H), 1.2 (d, 6H).
655	δ 7.4 (m, 3H), 7.2 (m, 2H), 6.4-6.3 (m, 1H), 5.6-5.5 (m, 1H), 4.7-4.6 (m, 1H), 2.9 (s, 1H), 1.6 (s, 6H), 1.2 (d, 6H).
656	δ 7.22 (m, 2H), 7.09 (m, 2H), 4.63 (m, 2H), 3.95 (m, 2H), 2.07 (m, 2H), 1.94 (m, 2H), 1.60 (d, 3H), 1.18 (d, 6H).
657	δ 7.40 (m, 1H), 6.94 (m, 2H), 4.82 (m, 1H), 4.64 (m, 1H), 2.40 (m, 1H), 1.60 (d, 3H), 1.20 (d, 6H).
658	δ 7.39 (m, 2H), 7.20 (m, 2H), 4.80 (m, 1H), 4.64 (m, 1H), 2.42 (m, 1H), 1.64 (d, 3H), 1.21 (d, 6H).
672	δ 7.26 (m, 2H), 7.09 (m, 2H), 4.67 (m, 1H), 4.4 (m, 1H), 3.9 (m, 2H), 3.8 (m, 2H), 1.22 (d, 6H).
675	δ 7.35 (m, 1H), 6.93 (t, 2H), 4.6 (m, 1H), 3.62 (t, 2H), 2.39 (t, 2H), 2.05 (m, 2H), (br, 6H)
677	δ 7.39 (m, 5H) 7.20 (m, 2H), 7.10 (m, 2H), 5.60 (s, 1H), 4.60 (m, 1.20 (d, 6H), 3.78 (s, 3H), 1.19 (d, 6H).
681	δ 7.3 (d, 2H), 7.2 (d, 2H), 5.0 (m, 1H), 4.6-4.7 (m, 1H), 4.0-4.2 (m, 4H), 3.0-3.3(m, 2H), 1.2-1.3(m, 12H).
682	δ 7.56 (s, 1H), 7.36 (m, 1H), 6.91 (m, 2H), 4.60 (m, 1H), 4.47 (s, 2H), 4.15 (q, 2H), 1.41 (t, 3H), 1.21 (brs, 6H).

683	δ 7.54 (s, 1H), 7.38 (m, 3H), 7.24 (m, 2H), 4.63 (m, 1H), 4.59 (s, 2H), 4.14 (q, 2H), 1.41 (t, 3H), 1.21 (d, 6H).
684	δ 7.56 (s, 1H), 7.36 (m, 2H), 7.19 (m, 2H), 4.63 (m, 1H), 4.48 (s, 2H), 4.15 (q, 2H), 1.41 (t, 3H), 1.19 (d, 6H).
685	δ 7.56 (s, 1H), 7.22 (m, 2H), 7.07 (m, 2H), 4.63 (m, 1H), 4.48 (s, 2H), 4.15 (q, 2H), 1.41 (t, 3H), 1.19 (d, 6H).
686	δ 7.68 (s, 1H), 7.22 (m, 2H), 7.07 (m, 2H), 5.12 (q, 1H), 4.63 (m, 1H), 4.14 (q, 2H), 1.73 (d, 3H), 1.41 (t, 3H), 1.18 (d, 6H).
687	δ 7.37 (m, 1H), 6.92 (m, 2H), 4.62 (m, 1H), 3.81 (t, 2H), 2.94 (s, 3H), 2.92 (s, 3H), 2.66 (t, 2H), 1.22 (m, 6H).
693	δ 9.52 (s, 1H), 7.22 (m, 3H), 7.1 (m, 2H), 4.64 (m, 1H), 4.44 (q, 1H), 1.6 (d, 3H), 1.2 (d, 6H).
694	δ 7.37 (m, 1H), 6.92 (m, 2H), 5.99 (m, 1H), 5.44 (m, 1H), 4.64 (m, 1H), 4.57 (m, 1H), 2.2-1.6 (m, 6H), 1.21 (br, 6H).
696	δ 7.37 (d, 2H), 7.17 (d, 2H), 5.99 (m, 1H), 5.44 (m, 1H), 4.64 (m, 1H), 4.57 (m, 1H), 2.2-1.6 (m, 6H), 1.21 (d, 6H).
697	δ 7.4 (m, 3H), 7.15 (m, 2H), 4.65 (m, 1H), 3.90 (m, 8H), 2.20 (m, 2H), 1.22 (d, 6H).
698	δ 7.4 (d, 2H), 7.20 (d, 2H), 4.65 (m, 1H), 3.90 (m, 8H), 2.20 (m, 2H), 1.22 (d, 6H).
701	δ 7.35 (d, 2H), 7.20 (d, 2H), 4.65 (m, 1H), 3.90 (m, 1H), 2.85 (m, 1H), 1.40-2.00 (m, 6H), 1.20 (d, 9H).
702	δ 7.40 (m, 1H), 6.92 (m, 2H), 4.65 (m, 1H), 3.90 (m, 1H), 2.85 (m, 1H), 1.40-2.00 (m, 6H), 1.25 (m, 9H).
705	δ 7.22 (m, 2H), 7.06 (m, 2H), 4.78 (q, 1H), 4.62 (m, 1H), 3.64 (m, 8H), 1.66 (d, 3H), 1.19 (d, 6H).
708	δ 7.29 (m, 1H), 6.92 (m, 2H), 4.65 (m, 1H), 4.4-3.5 (m, 5H), 2.04 (s, 3H), 1.23 (bs, 6H).
712	δ 7.28 (m, 2H), 7.08 (m, 2H), 4.62 (m, 1H), 3.52 (m, 4H), 1.8 (m, 4H), 1.18 (d, 6H).
713	δ 7.23 (m, 2H), 7.08 (m, 2H), 4.61 (m, 1H), 3.66 (t, 2H), 3.5 (t, 2H), 2.11 (m, 2H), 1.21 (d, 6H).
714	δ 7.3 (m, 1H), 6.92 (m, 2H), 4.65 (m, 1H), 4.25 (m, 1H), 3.71 (m, 2H), 1.49 (d, 3H), 1.23 (bs, 6H).
715	δ 7.40 (m, 1H), 6.92 (m, 2H), 4.65 (m, 1H), 3.90 (m, 1H), 3.56 (q, 2H), 3.30 (m, 2H), 1.82 (m, 1H), 1.50 (m, 5H), 1.20 (m, 6H).
717	δ 7.40 (m, 3H), 7.25 (m, 2H), 4.65 (m, 1H), 3.90 (m, 1H), 2.85 (m, 1H), 1.50-2.00 (m, 6H), 1.25 (d, 3H), 1.20 (d, 6H)
718	δ 7.25 (m, 2H), 7.10 (m, 2H), 4.65 (m, 1H), 3.90 (m, 1H), 2.85 (m, 1H), 1.50-2.00 (m, 6H), 1.25 (d, 3H), 1.20 (d, 6H).
720	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.6 (m, 1H), 3.1 (m, 1H), 1.5 (m, 3H), 1.4 (m, 1H), 1.2 (m, 6H), 0.6-0.3 (m, 4H).
721	δ 7.22 (m, 2H), 7.09 (m, 2H), 4.92 (m, 1H), 4.65 (m, 1H), 4.39 (m, 2H), 2.91 (m, 2H), 1.68 (d, 3H), 1.19 (d, 6H).
723	δ 7.39 (m, 7H) 7.20 (m, 2H), 7.10 (m, 2H), 5.60 (s, 1H), 4.60 (m, 1H), 3.78 (s, 3H), 1.19 (d, 6H).
724	δ 7.40 (m, 7H), 7.15 (d, 2H), 5.60 (s, 1H), 4.60 (m, 1H), 3.79 (s, 3H), 1.20 (d, 6H).

725	δ 7.4 (m, 2H), 7.2 (m, 2H), 5.1 (m, 1H), 4, 6 (m, 1H), 4.1 (m, 1H), 3.8 (m, 1H), 3.4 (s, 3H), 1.2 (d, 6H).
726	δ 7.4 (m, 2H), 7.2 (m, 2H), 5.1 (m, 1H), 4, 6 (m, 1H), 4.1 (m, 1H), 3.9 (m, 1H), 3.4 (s, 3H), 3.3 (s, 3H), 1.2 (d, 6H).
727	δ 7.2 (m, 2H), 7.1 (m, 2H), 5.97 br, 1H), 4.65 (m, 1H), 3.65 (m, 2H), 3.45 (m, 2H), 1.91 (s, 3H), 1.19 (d, 6H).
729	δ 7.39 (m, 3H), 7.25 (m, 2H), 4.91 (q, 1H), 4.64 (m, 1H), 4.37 (m, 2H), 2.92 (m, 2H), 1.67 (d, 3H), 1.20 (d, 6H).
730	δ 7.35 (m, 1H), 6.93 (m, 2H), 4.93 (q, 1H), 4.65 (m, 1H), 4.39 (m, 2H), 2.94 (m, 2H), 1.68 (d, 3H), 1.20 (d, 6H).
731	δ 8.4 (s, 1H), 7.6 (m, 1H), 7.5 (m, 1H), 7.4 (m, 3H), 7.2 (m, 2H), 5.84 (s, 1H), 5.3 (s, 1H), 4.7 (m, 1H), 4.6 (s, 2H), 1.2 (d, 6H).
732	δ 7.3-7.2 (m, 3H), 7.1-7.0 (m, 2H), 6.4 (s, 1H), 5.7 (s, 1H), 4.7-4.6 (m, 1H), 4.3 (s, 2H), 3.75 (s, 3H), 1.2 (d, 6H).
734	δ 7.4 (m, 3H), 7.2 (m, 2H), 5.1 (m, 1H), 4, 6 (m, 1H), 4.1 (m, 1H), 3.9 (m, 1H), 3.4 (s, 3H), 3.3 (s, 3H), 1.2 (d, 6H).
735	δ 7.4 (m, 3H), 7.2 (m, 2H), 5.1 (m, 1H), 4, 6 (m, 1H), 4.1 (m, 1H), 3.8 (m, 1H), 3.4 (s, 3H), 1.2 (d, 6H).
737	δ 7.3 (m, 1H), 6.9 (m, 2H), 5.1 (m, 1H), 4, 6 (m, 1H), 4.1 (m, 1H), 3.8 (m, 1H), 3.4 (s, 3H), 1.2 (d, 6H).
738	δ 7.3 (m, 1H), 6.9 (m, 2H), 5.1 (m, 1H), 4, 6 (m, 1H), 4.1 (m, 1H), 3.9 (m, 1H), 3.4 (s, 3H), 3.3 (s, 3H), 1.2 (d, 6H).
742	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.9 (m, 1H), 4.7 (m, 1H), 3.4-3.6 (m, 2H), 2.1 (m, 1H), 1.9 (m, 1h), 1.2 (m, 9H), 0.9 (t, 3H).
744	δ 7.40 (m, 1H), 6.92 (m, 2H), 4.66 (m, 1H), 3.67 (m, 2H), 2.56 (m, 2H), 1.95 (m, 1H), 1.60 (d, 6H).
746	δ 7.41 (m, 3H), 7.39 (m, 2H), 5.60 (m, 1H), 4.62 (m, 1H), 3.82 (m, 2H) 1.20 (d, 6H).
747	δ 7.38 (m, 3H) 7.25 (m, 2H), 4.66 (m, 1H), 4.25 (m, 1H), 3.65 (m, 2H), 1. 49 (d, 3H), 1.20 (d, 6H).
748	δ 7.39 (m, 2H) 7.17 (m, 2H), 4.62 (m, 1H), 4.25 (m, 1H), 3.65 (m, 2H), 1. 49 (d, 3H), 1.20 (d, 6H).
750	δ 7.39 (m, 3H) 7.26 (m, 2H), 4.63 (m, 1H), 3.65 (m, 2H), 3, 48 (m, 2H), 2.10 (m, 2H), 1.20 (d, 6H).
753	δ 7.22 (m, 2H), 7.11 (m, 2H), 4.64 (m, 1H), 4.58 (m, 1H), 2.42 (m, 1H), 2.04 (m, 1H), 1.94 (m, 1H), 1.20 (d, 6H), 0.99 (t, 3H).
758	δ 1.20 (m, 6H), 4.07 (m, 2H), 4.17 (s, 2H), 4.32 (m, 2H), 4.62 (m, 1H), 6.92 (m, 2H), 7.36 (m, 1H).
759	δ 7.38 (d, 2H), 7.18 (d, 2H), 4.92 (q, 1H), 4.62 (m, 1H), 4.39 (m, 2H), 2.91 (m, 2H), 1.68 (d, 3H), 1.20 (d, 6H).
763	δ 7.40 (m, 1H), 6.92 (m, 2H), 4.66 (m, 1H), 3.67 (m, 2H), 2.56 (m, 2H), 1.95 (m, 1H), 1.60 (d, 6H).
764	δ 7.38 (m, 1H), 6.93 (m, 2H), 4.62 (m, 1H), 4.25 (s, 2H), 2.37 (m, 1H), 1.25 (d, 6H)
765	δ 1.20 (m, 6H), 4.24 (S, 2H), 4.25 (M, 2H), 4.38 (M, 2H), 4.63 (M, 1H), 7.09 (M, 2H), 7.24 (M, 2H).

766	δ 7.25 (m, 2H), 7.15 (m, 1H) , 4.95 (brs, 1H), 4.65 (m, 1H), 4.16 (m, 2H), 3.39 (s, 3H), 2.19 (m, 1H), 1.92 (m, 3H), 1.19 (d, 6H).
767	δ 7.26 (m, 2H), 7.11 (m, 2H), 4.64 (m, 1H), 3.67 (t, 2H), 2.56 (m,2H), 1.96 (m,1H), 1.21 (d, 6H).
768	δ 7.38 (m, 3H), 7.26 (m, 2H), 4.64 (m, 1H), 3.66 (t, 2H), 2.54 (m, 2H), 1.92 (m,1H), 1.22 (d, 6H).
769	δ 7.39 (m, 3H), 7.24 (m, 2H), 4.74 (s, 2H), 4.62 (m, 1H), 3.18 (m, 1H), 1.35 (d, 6H), 1.21 (d 6H).
771	δ 8.3 (d, 1H), 7.6 (dd, 1H), 7.4 (d, 1H), 4.7 (septet, 1H), 4.2 (septet, 1H), 1.40 (d, 3H), 1.21 (d, 3H).
772	δ 7.4 (m, 2H), 7.2 (m, 2H), 4.9 (m, 1H), 4.7 (m, 1H), 3.4-3.6 (m, 2H), 2.1 (m, 1H), 1.9 (m, 1H), 1.2 (m, 9H), 0.9 (t, 3H).
773	δ 7.4 (m, 2H), 7.2 (m, 2H), 4.9 (m, 1H), 4.7 (m, 1H), 3.4-3.6 (m, 2H), 2.1 (m, 1H), 1.9 (m, 1H), 1.2 (m, 9H), 0.9 (t, 3H).
774	δ 7.3 (m, 1H), 6.9 (m, 2H), 4.9 (m, 1H), 4.7 (m, 1H), 3.4-3.6 (m, 2H), 2.1 (m, 1H), 1.9 (m, 1H), 1.2 (m, 9H), 0.9 (t, 3H).
776	δ 7.3 (m, 1H), 6.90 (m, 2H), 4.65 (m, 1H), 4.20 (m, 5H), 1.70 (m, 3H), 1.25 (m, 12H).
778	δ 7.4 (m, 1H), 6.90 (m, 2H), 4.65 (m, 1H), 3.60 (m, 7H), 2.85 (m, 3H), 1.21 (m, 6H).
779	δ 7.4 (d, 2H), 7.2 (d, 2H), 4.65 (m, 1H), 3.60 (m, 7H), 2.85 (m, 3H), 1.21 (m, 6H).
782	δ 7.22 (m, 2H), 7.09 (t, 2H), 5.93 (t, 1H), 4.62 (m, 1H), 4.21 (d, 2H), 1.2 (d, 6H).
783	δ 7.38 (m, 1H), 6.96 (m, 2H), 4.60 (m, 2H), 2.40 (m, 1H), 2.10-1.80 (m, 2H), 1.22 (m, 1H), 0.94 (m, 3H).
784	δ 7.39 (m, 2H), 7.20 (m, 2H), 4.64 (m, 1H), 4.25 (m, 2H), 2.33 (m, 1H), 1.21 (d, 6H).
785	δ 7.35 (m, 1H), 6.92 (m, 2H), 5.32 (q, 1H), 4.62 (m, 1H), 2.31 (s, 3H), 2.24 (s, 3H), 1.83 (d, 3H), 1.22 (br, 6H).
792	δ 7.39 (m, 3H) 7.25 (m, 2H), 4.61 (m, 1H), 3.52 (m, 4H), 1.80 (m, 4H), 1.20 (d, 6H).
797	δ 7.4 (m, 3H), 7.3-7.1 (m, 2H), 5.5 (bs, 1H), 4.7-4.6 (m, 1H), 3.94 (bs, 2H), 2.35 (s, 2H), 2.3-2.2 (m, 2H), 2.0 (m, 2H), 1.2 (d, 6H), 1.2 (s, 6H).
800	δ 7.38 (m, 3H), 7.25 (m, 2H), 4.64 (m, 1H), , 2.35 (m, 1H), 1.21 (d, 6H), 1.15 (s, 3H), 1.05 (m, 1H), 0.94 (m, 4H).
801	δ 7.37 (d, 2H), 7.19 (d, 2H), 4.64 (m, 1H), 2.37 (m, 1H), 1.19 (m, 9H), 1.07 (m, 1H), 0.96 (m, 4H).
802	δ 7.37 (m, 1H), 6.91 (m, 2H), 4.64 (m, 1H), 2.37 (m, 1H), 1.19 (m, 9H), 1.07 (m, 1H), 0.96 (m, 4H).
803	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.64 (m, 1H), 4.52 (m, 1H), 2.40 (m, 1H), 2.04 (m, 1H), 1.92 (m, 1H), 1.44 and 0.98 (t, 3H), 1.22 (d, 6H).
804	δ 7.38 (m, 2H), 7.21 (m, 2H), 4.64 (m, 1H), 3.67 (t, 2H), 2.56 (m, 2H), 1.96 (m, 1H), 1.22 (d, 6H).
805	δ 7.25 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 4.40 (m, 1H), 3.70 (m, 4H), 1.20 (d, 6H).
808	δ 7.39 (m, 2H), 7.20 (m, 2H), 7.64 (m, 1H), 4.58 (m, 1H), 2.43 (m, 1H), 2.40 (m, 1H), 1.92 (m, 1H), 1.21 (d, 6H), 0.97 (t, 3H).
810	δ 7.22 (m, 2H), 7.09 (m, 2H), 4.46 (m, 1H), 4.95 (m, 1), 4.64 (m, 1H), 3.02 (m, 1H), 2.76 (m, 1H), 1.68 (d, 3H), 1.20 (d, 6H).

811	δ 7.21 (m, 2H) , 7.11 (m, 2H), 4.98 (m, 1H), 4.64 (m, 1H), 3.89 (m, 1H), 2.98 (dd, 1H), 2.69 (dd, 1H), 1.5 (d, 3H), 1.20 (d, 6H).
812	δ 7.42 (m, 3H), 7.40 (m, 2H), 5.44 (m, 1H), 4.93 (m, 1H), 4.64 (m, 1H), 2.80 (m, 1H), 2.70 (m, 1H), 1.28 (d, 3H), 1.22 (d, 6H).
814	δ 7.39 (d, 2H), 7.17 (d, 2H), 7.11 (brs, 1H), 4.92 (m, 1H), 4.64 (m, 1H), 3.89 (m, 1H), 3.02 (m, 1H), 2.70 (m, 1H), 1.52 (d, 3H), 1.20 (d, 6H).
815	δ 7.32 (m, 1H), 7.11 (brs, 1H), 6.94 (m, 2H), 4.88 (m, 1H), 4.64 (m, 1H), 3.90 (m, 1H), 3.01 (m, 1H), 2.70 (m, 1H), 1.51 (d, 3H), 1.23 (br, 6H).
816	δ 7.40 (m, 3H), 7.23 (m, 2H), 7.09 (brs, 1H), 4.91 (m, 1H), 4.66 (m, 1H), 3.88 (m, 1H), 3.00 (m, 1H), 2.70 (m, 1H), 1.50 (d, 3H), 1.21 (d, 6H).
817	δ 7.28 (m, 1H), 6.91 (m, 2H), 4.63 (m, 1H), 4.11 (m, 1H), 1.28 (d, 3H), 1.22 (d, 6H).
819	δ 7.22 (m, 2H), 7.08 (m, 2H), 4.62 (m, 1H), 3.78 (d, 1H), 3.50 (d, 1H), 2.70 (d, 1H), 2.60 (d, 1H), 1.33 (s, 3H), 1.18 (d, 6H).
822	δ 7.40 (m, 2H), 6.92 (m, 2H), 4.60 (m, 1H), 3.66 (m, 2H), 3.50 (m, 2H), 2.05 (m, 2H), 1.26 (d, 6H).
823	δ 7.40 (m, 2H), 6.92 (m, 2H), 4.61 (m, 1H), 3.54 (m, 4H), 1.80 (m, 4H), 1.22 (d, 6H).
824	δ 7.39 (m, 3H), 7.24 (m, 2H), 4.62 (m, 1H), 4.30 (m, 1H), 3.90 (m, 1H), 3.70 (m, 1H), 3.60 (m, 1H), 3.30 (s, 3H), 1.22 (d, 6H).
825	δ 7.21 (m, 2H), 7.08 (m, 2H), 4.62 (m, 1H), 4.30 (m, 1H), 3.90 (m, 1H), 3.71 (m, 1H), 3.60 (m, 1H), 3.30 (s, 3H), 1.22 (d, 6H).
829	δ 4.66 (s, 1H), 4.5 (m, 1H), 4.3 (m, 1H), 1.48 (d, 6H), 1.42 (s, 9H), 1.28 (d, 6H).
837	δ 7.20 (m, 2H), 7.10 (m, 2H), 5.65 (m, 2H), 5.05 (d, 1H), 4.65 (m, 1H), 4.20 (m, 4H), 1.45 (d, 3H), 1.20 (d, 6H).
839	δ 7.12-7.2 (m, 3H), 4.62 (m, 1H), 4.17 (m, 1H), 1.39 (d, 6H), 1.25 (d, 6H).
840	δ 7.23 (m, 2H), 7.1 (m, 2H), 4.2 (m, 1H), 3.80 (q, 2H), 1.40 (d, 6H), 1.27 (t, 3H).
841	δ 7.38 (d, 2H), 7.18 (d, 2H), 6.0 (m, 1H), 5.25 (m, 2H), 4.6 (m, 2H), 1.5 (d, 3H), 1.2 (d, 6H).
842	δ 7.38 (d, 2H), 6.93 (m, 2H), 5.98 (m, 1H), 5.24 (m, 2H), 4.6 (m, 2H), 1.49 (d, 3H), 1.22 (br, 6H).
843	δ 7.4 (m, 3H), 7.25 (m, 2H), 6.0 (m, 1H), 5.22 (m, 2H), 4.6 (m, 2H), 1.48 (d, 3H), 1.2 (d, 6H).
845	δ 7.38 (d, 2H), 6.93 (m, 2H), 4.9 (s, 2H), 4.64 (m, 1H), 4.41 (m, 1H), 3.45 (m, 2H), 2.95 (m, 2H), 1.21 (d, 6H).
846	δ 7.4 (m, 3H), 7.25 (m, 2H), 4.89 (s, 2H), 4.64 (m, 1H), 4.41 (m, 1H), 3.45 (m, 2H), 2.95 (m, 2H), 1.21 (d, 6H).
849	δ 9.53 (s, 1H), 7.39 (d, 2H), 7.19 (d, 2H), 4.64 (m, 1H), 4.44 (q, 1H), 1.6 (d, 3H), 1.21 (d, 6H).
850	δ 9.51 (s, 1H), 7.4 (d, 3H), 7.25 (m, 2H), 4.64 (m, 1H), 4.42 (q, 1H), 1.58 (d, 3H), 1.21 (d, 6H).
852	δ 7.42 (s,1H), 7.37 (m, 2H), 7.18 (m, 2H), 4.63 (m, 1H), 4.48 (s, 2H), 3.81 (s, 3H), 1.20 (d, 6H).
853	δ 7.44 (s, 1H), 7.38 (m, 2H), 7.24 (m, 3H), 4.63 (m, 1H), 4.47 (s, 2H), 3.80 (s, 3H), 1.20 (d, 6H).

854	δ 7.47 (s, 1H), 7.37 (m, 1H), 6.93 (m, 2H), 4.62 (m, 1H), 4.49 (s, 2H), 3.81 (s, 3H), 1.21 (brs, 6H).
866	δ 7.34 (m, 2H), 6.91 (m, 2H), 5.33 (m, 1H), 4.62 (m, 1H), 3.92 (s, 2H), 1.91 (m, 3H), 1.21 (brs, 6H).
871	δ 7.40 (m, 2H), 7.19 (m, 2H), 4.65 (m, 1H), 4.30 (m, 1H), 3.95 (dd, 1H), 3.75 (m, 1H), 3.60 (m, 1H), 3.30 (s, 3H), 1.22 (d, 6H).
872	δ 7.30 (m, 1H), 6.92 (m, 2H), 4.62 (m, 1H), 4.30 (m, 1H), 3.90 (m, 1H), 3.73 (m, 2H), 3.60 (m, 1H), 3.30 (s, 3H), 1.26 (d, 6H).
876	δ 7.36 (m, 2H), 7.17 (m, 2H), 4.60 (m, 1H), 4.12 (m, 1H), 1.20 (d, 3H), 1.19 (d, 6H).
882	δ 7.38 (m, 3H), 7.25 (m, 2H), 4.62 (m, 2H), 2.40 (m, 1H), 2.00-1.80 (m, 2H), 1.50-1.30 (m, 2H), 1.20 (d, 6H), 0.92 (t, 3H).
884	δ 7.23 (m, 2H), 7.08 (m, 2H), 5.75 (m, 1H), 5.21 (m, 2H), 4.65 (m, 1H), 4.41 (s, 1H), 4.32 (s,1H), 4.25 (s, 1H), 3.98 (s, 1H), 3.91 (d, 1H), 3.86 (s, 1.5H), 3.78 (d, 1H), 3.74 (s, 1.5H), 1.20 (d, 6H). *syn/anti* mixture
885	δ 7.37 (m, 3H), 7.26 (m, 2H), 5.75 (m, 1H), 5.20 (m, 2H), 4.63 (m, 1H), 4.39 (s, 1H), 4.31 (s, 1H), 4.24 (s, 1H), 3.94 (s, 1H), 3.89 (d, 1H), 3.84 (s, 1.5H), 3.75 (d, 1H), 3.73 (s, 1.5H), 1.20 (d, 6H). *syn/an*ti mixture
886	δ 7.36 (m, 1H), 6.91 (m, 2H), 5.80 (m, 1H), 5.21 (m, 2H), 4.63 (m, 1H), 4.40 (s, 1H), 4.32 (s, 1H), 4.25 (s, 1H), 3.96 (s, 1H), 3.92 (d, 1H), 3.85 (s, 1.5H), 3.80 (d, 1H), 3.73 (s, 1.5H), 1.20 (br, 6H) *syn/anti* mixture
887	δ 7.36 (d, 2H), 7.20 (d, 2H), 5.76 (m, 1H), 5.19 (m, 2H), 4.64 (m, 1H), 4.41 (s, 1H), 4.32 (s, 1H), 4.25 (s, 1H), 3.95 (s, 1H), 3.91 (d, 1H), 3.86 (s, 1.5H), 3.78 (d, 1H), 3.74 (s, 1.5H), 1.20 (d, 6H). *syn/anti* mixture
888	δ 7.4 (d, 2H), 7.29 (d, 2H), 4.63 (m, 1H), 4.15 (m, 1H), 3.58 (m, 2H), 1.49-1.27 (m, 9H).
892	δ 7.20 (m, 2H), 7.08 (t, 2H), 4.65 (m, 1H), 3.70 (m, 1H), 3.42 (m, 2H), 3.30 (m, 2H), 3.12 (s, 3H), 1.90 (m, 3H), 1.50 (m, 1H), 1.20 (m, 6H).
898	δ 7.20 (m, 2H), 7.08 (t, 2H), 4.97 (d, 1H), 4.65 (m, 1H), 3.90 (m, 2H), 3.80 (m, 1H), 3.62 (m, 1H), 3.47 (m, 1H), 1.50 (m, 4H), 1.40 (d, 3H), 1.20 (m, 6H).
900	δ 7.30 (m, 9H), 4.63 (m, 1H), 4.44 (s, 1H), 4.39 (s, 1H), 4.34 (s, 1H), 4.29 (s, 1H), 4.25 (s, 1H), 3.96 (s, 1H), 3.83 (s, 1.5H), 3.71 (s, 1.5H), 1.21 (m, 6H). *syn/anti* mixture
901	δ 7.30 (m, 10H), 4.63 (m, 1H), 4.44 (s, 1H), 4.39 (s, 1H), 4.34 (s, 1H), 4.29 (s, 1H), 4.25 (s, 1H), 3.96 (s, 1H), 3.83 (s, 1.5H), 3.71 (s, 1.5H), 1.21(m,6H). *syn/anti* mixture
902	δ 7.23 (m, 2H), 7.08 (m, 2H), 4.65 (m, 1H), 4.39 (s, 1H), 4.29 (s, 1H), 4.20 (s, 1H), 3.91 (s, 1H), 3.86 (s, 1.5H), 3.74 (s, 1.5H), 3.28 (s, 1.5H), 3.14 (s, 1.5H), 1.20 (d, 6H). *syn/anti* mixture
903	δ 7.37 (m, 3H), 7.26 (m, 2H), 4.64 (m, 1H), 4.38 (s, 1H), 4.28 (s, 1H), 4.19 (s, 1H), 3.89 (s, 1H), 3.85 (s, 1.5H), 3.74 (s, 1.5H), 3.27 (s, 1.5H), 3.10 (s, 1.5H), 1.20 (d, 6H). *syn/anti* mixture
904	δ 7.37 (m, 3H), 7.26 (m, 2H), 4.64 (m, 1H), 4.38 (s, 1H), 4.28 (s, 1H), 4.19 (s, 1H), 3.89 (s, 1H), 3.85 (s, 1.5H), 3.74 (s, 1.5H), 3.27 (s, 1.5H), 3.10 (s, 1.5H), 1.20 (d, 6H). 4:1 *syn/anti* mixture

905	δ 7.35 (d, 2H), 7.27 (d, 2H), 4.39 (m, 2H), 4.15 (m, 1H), 3.40 (s, 3H), 3.38 (s, 3H), 1.39 (d, 6H), 1.26 (d, 3H).
908	δ 7.36 (m, 3H), 7.26 (m, 2H), 4.35 (m, 2H), 4.15 (m, 1H), 1.70 (d, 3H), 1.38 (m, 6H).
909	δ 7.28 (m, 2H), 7.09 (m, 2H), 4.38 (m, 2H), 4.18 (m, 1H), 1.68 (d, 3H), 1.38 (m, 6H).
913	δ 7.4 (m, 3H), 7.25 (m, 2H), 4.64 (m, 1H), 3.71 (t, 2H), 2.84 (t, 2H), 2.14 (s, 3H), 1.21 (d, 6H).
914	δ 9.73 (s, 1H), 7.22 (m, 2H), 7.09 (m, 2H), 4.64 (m, 1H), 3.81 (t, 2H), 2.88 (t, 2H), 1.2 (d, 6H).
915	δ 7.35 (m, 1H), 6.92 (m, 2H), 4.63 (m, 1H), 3.51 (t, 2H), 2.45 (t, 2H), 2.11 (s, 3H), 1.89 (m, 2H), 1.22 (br, 6H).
916	δ 7.37 (m, 2H), 7.18 (m, 2H), 4.64 (m, 1H), 3.51 (t, 2H), 2.45 (t, 2H), 2.11 (s, 3H), 1.89 (m, 2H), 1.22 (br, 6H).
917	δ 7.37 (m, 2H), 7.21 (m, 2H), 4.62 (m, 2H), 2.40 (m, 1H), 2.00-1.80 (m, 2H), 1.50-1.30 (m, 2H), 1.20 (d, 6H), 0.92 (t, 3H).
919	δ 7.34 (m, 5H), 4.42 (m, 2H), 4.18 (m, 1H), 3.74 (s, 3H), 3.42 (s, 3H), 1.37 (d, 6H), 1.27 (m, 3H).
920	δ 7.30 (m, 2H), 7.09 (m, 2H), 4.38 (m, 2H), 4.18 (m, 1H), 3.41 (s, 3H), 3.38 (s, 3H), 1.39 (d, 6H), 1.27 (m, 3H).
922	δ 7.36 (d, 2H), 7.20 (d, 2H), 4.64 (m, 1H), 4.39 (s, 1H), 4.29 (s, 1H), 4.20 (s, 1H), 3.91 (s, 1H), 3.86 (s, 1.5H), 3.74 (s, 1.5H), 3.28 (s, 1.5H), 3.14 (s, 1.5H), 1.20 (d, 6H). *syn/anti* mixture
923	δ 7.38 (m, 1H), 6.91 (m, 2H), 4.64 (m, 1H), 4.39 (s, 1H), 4.29 (s, 1H), 4.19 (s, 1H), 3.91 (s, 1H), 3.86 (s, 1.5H), 3.74 (s, 1.5H), 3.29 (s, 1.5H), 3.15 (s, 1.5H), 1.20 (br, 6H). *syn/anti* mixture
927	δ 7.37 (m, 2H), 6.91 (m, 2H), 6.15 (m, 1H), 5.55 (m, 1H), 5.00 (m, 1H), 4.64 (m, 1H), 2.7 (m, 1H), 2.30 (m, 2H), 1.98 (m, 1H), 1.2 (br, 6H).
929	δ 7.4 (m, 3H), 7.25 (m, 2H), 6.17 (m, 1H), 5.55 (m, 1H), 5.00 (m, 1H), 4.64 (m, 1H), 2.7 (m, 1H), 2.3 (m, 2H), 1.99 (m, 1H), 1.2 (d, 6H).
930	δ 7.24 (m, 3H), 7.10 (m, 2H), 4.65 (m, 2H), 3.8 (m, 2H), 3.39 (m, 2H), 1.21 (d, 6H).
935	δ 7.35 (m, 1H), 6.91 (m, 2H), 4.63 (m, 1H), 3.74 (t, 2H), 2.85 (t, 2H), 2.15 (s, 3H), 1.21 (br, 6H).
947	δ 7.31 (m, 1H), 6.89 (m, 2H), 4.6 (m, 1H), 3.75 (m, 1H), 2.72 (m, 4H), 2.4 (m, 2H), 2.00 (m, 2H), 1.23 (m, 6H).
952	δ 7. 51 (m, 3H), 7.24 (m, 2H), 6.86 (q, 1H), 4.31 (m, 1H), 1.97 (d, 3H), 1.49 (d, 6H).
953	δ 7.34 (m, 5H), 4.22 (m, 1H), 2.14 (s, 3H), 1.92 (s, 3H), 1.44 (d, 6H).
955	δ 7.43 (m, 5H), 4.64 (m, 1H), 4.17 (m, 1H), 3.79 (d, 4H), 1.38 (d, 6H).
956	δ 7.44 (m, 2H), 7.12 (m, 2H), 4.19 (m, 1H), 4.13 (m, 2H), 3.78 (d, 4H), 1.40 (d, 6H).
959	δ 7.38 (m, 3H), 7.26 (m, 2H), 4.64 (m, 1H), 4.26 (m, 1H), 2.41 (m, 2H), 1.22 (m, 6H), 1.10 (d, 3H), 0.85 (d, 3H).
962	δ 7.22 (m, 2H), 7.10 (m, 2H), 4.64 (m, 1H), 3.51 (t, 2H), 2.45 (t, 2H), 2.11 (s, 3H), 1.90 (m, 2H), 1.2 (d, 6H).

963	δ 7.39 (m, 3H), 7.26 (m, 2H), 4.64 (m, 1H), 3.50 (t, 2H), 2.43 (t, 2H), 2.11 (s, 3H), 1.89 (m, 2H), 1.2 (d, 6H).
964	δ 9.73 (s, 1H), 7.37 (m, 1H), 6.93 (m, 2H), 4.63 (m, 1H), 3.81 (t, 2H), 2.89 (t, 2H), 1.22 (br, 6H).
965	δ 9.72 (s, 1H), 7.39 (m, 3H), 7.25 (m, 2H), 4.64 (m, 1H), 3.79 (t, 2H), 2.87 (t, 2H), 1.21 (br, 6H).
967	δ 7.22 (m, 2H), 7.08 (m, 2H), 4.64 (m, 1H), 3.94 (m, 1H), 2.78 (m, 1H), 2.58 (m, 1H), 2.00-1.70 (m, 3H), 1.26 (m, 2H), 1.20 (m, 6H), 0.90 (m, 3H).

[a] ^1H NMR data are in ppm downfield from tetramethylsilane. Couplings are designated by (s)-singlet, (d)-doublet, (t)-triplet, (q)-quartet, (m)-multiplet, (dd)-doublet of doublets, (dt)-doublet of triplets, (br s)-broad singlet.

TEST A

Seeds of barnyardgrass (*Echinochloa crus-galli*), crabgrass (*Digitaria spp.*), morningglory (*Ipomoea spp.*), and velvetleaf (*Abutilon theophrasti*) were planted into a sandy loam soil and treated preemergence by soil drench with test chemicals formulated in a non-phytotoxic solvent mixture which includes a surfactant. At the same time, these crop and weed species were also treated postemergence sprayed to runoff , with test chemicals formulated in the same manner.

Plants ranged in height from two to eighteen cm and were in the one to two leaf stage for the postemergence treatment. Treated plants and untreated controls were maintained in a greenhouse for approximately eleven days, after which all treated plants were compared to untreated controls and visually evaluated for injury. Plant response ratings, summarized in Table A, are based on a 0 to 10 scale where 0 is no effect and 10 is complete control.

Table A	COMPOUND															
Rate 2000 g/ha	1	2	3	10	42	43	52	53	99	114	127	128	136	137	177	183
Pre-emergence																
Barnyardgrass	9	9	9	10	0	0	9	8	9	10	9	0	9	10	9	9
Crabgrass	9	2	3	9	0	1	10	9	10	10	8	0	10	10	9	5
Morningglory	0	0	0	1	0	0	0	0	2	6	0	0	0	3	0	0
Velvetleaf	0	0	0	2	0	0	0	0	3	6	0	0	0	5	1	0

Table A	COMPOUND			
Rate 2000 g/ha	184	225	377	386
Pre-emergence				
Barnyardgrass	9	10	0	0
Crabgrass	9	10	0	0
Morningglory	0	8	0	0
Velvetleaf	0	7	0	0

Table A	COMPOUND															
Rate 1000 g/ha	1	2	3	10	42	43	52	53	99	114	127	128	136	137	177	183
Barnyardgrass	8	8	6	9	0	0	5	3	7	8	6	0	4	8	0	0
Crabgrass	5	0	0	8	0	0	8	6	7	7	7	0	6	8	3	1
Morningglory	0	0	0	0	0	0	1	0	2	10	0	0	9	10	0	0
Velvetleaf	0	0	0	4	0	0	1	1	2	5	0	0	2	2	2	0

Table A	COMPOUND			
Rate 1000 g/ha	184	225	377	386
Postemergence				
Barnyardgrass	2	9	0	0
Crabgrass	1	9	0	0
Morningglory	10	10	0	0
Velvetleaf	2	3	0	0

<u>TEST B</u>

Seeds of bedstraw (*Galium aparine*), blackgrass (*Alopecurus myosuroides*), surinam grass (*Brachiaria decumbens*), cocklebur (*Xanthium strumarium*), corn (*Zea mays*), crabgrass (*Digitaria sanguinalis*), giant foxtail (*Setaria faberii*), morningglory (*Ipomoea hederacea*), pigweed (*Amaranthus retroflexus*), rape (*Brassica napus*), soybean (*Glycine max*), sugar beet (*Beta vulgaris*), velvetleaf (*Abutilon theophrasti*), wheat (*Triticum aestivum*), wild oat (*Avena fatua*) and purple nutsedge (*Cyperus rotundus*) tubers were planted and treated preemergence with test chemicals formulated in a non-phytotoxic solvent mixture which included a surfactant.

At the same time, these crop and weed species were also treated with postemergence applications of test chemicals formulated in the same manner. Plants ranged in height from 2 to 18 cm (1- to 4-leaf stage) for postemergence treatments. Plant species in the flood test consisted of rice (*Oryza sativa*), smallflower flatsedge (*Cyperus difformis*), duck salad (*Heteranthera limosa*) and barnyardgrass (*Echinochloa crus-galli*) grown to the 2-leaf stage for testing. Treated plants and controls were maintained in a greenhouse for twelve to sixteen days, after which all species were compared to controls and visually evaluated. Plant response ratings, summarized in Table B, are based on a scale of 0 to 10 where 0 is no effect and 10 is complete control. A dash (-) response means no test result.

Tabl B	COMPOUND																							
Rate 2000 g/ha	7	18	30	36	46	47	78	86	87	93	94	103	105	107	108	109	111	113	116	117	118	119	121	122
Pre-emergence																								
Barnyardgrass	0	9	0	0	9	8	3	0	0	0	7	0	0	0	0	9	9	9	9	3	6	0	9	0
Ducksalad	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6	0	8	8	1	0	0	0	0
Rice	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	7	0	7	4	0	0	0	5	0
S. Flatsedge	0	0	0	0	8	0	7	0	0	0	8	0	0	5	0	8	0	9	9	4	0	0	9	0

Table B	COMPOUND							
Rate 2000 g/ha	123	124	125	139	154	177	183	274
Pre-emergence								
Barnyardgrass	0	0	0	6	0	0	0	0
Ducksalad	0	0	0	2	0	0	0	0
Rice	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0

Tabl B	COMPOUND		
Rate 2000 g/ha	157	177	183
Postemergence			
B. signalgrass	-	0	0
Barnyardgrass	0	-	-
Bedstraw	-	-	-
Blackgrass	-	6	0
Cocklebur	-	0	2
Corn	-	0	0
Crabgrass	-	0	0
Ducksalad	0	-	-
Giant foxtail	-	2	0
Morningglory	-	1	5
Nutsedge	-	0	0
Rape	-	3	0
Redroot pigweed	-	3	0
Rice	0	-	-
S. Flatsedge	0	-	-
Soybean	-	4	3
Sugarbeets	-	0	0
Velvetleaf	-	4	1

Wheat	-	3	0
Wild oats	-	2	0

Table B	COMPOUND	
Rate 2000 g/ha	177	183
Preemergence		
B. signalgrass	9	2
Bedstraw	10	10
Blackgrass	9	2
Cocklebur	2	0
Corn	0	0
Crabgrass	9	2
Giant foxtail	10	9
Morningglory	0	0
Nutsedge	0	0
Rape	0	0
Redroot pigweed	0	0
Soybean	0	0
Sugarbeets	0	0
Velvetleaf	3	0
Wheat	2	0
Wild oats	10	3

Table B												COMPOUND													
Rate 1000 g/ha	7	18	30	35	36	46	47	78	86	87	93	94	103	105	107	108	109	111	113	116	117	118	119	121	122
Pre-emergence																									
Barnyardgrass	0	9	0	0	0	0	6	0	0	0	0	0	0	0	0	0	8	0	0	0	0	3	0	9	0
Ducksalad	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
S. Flatsedge	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	9	0

Table B										COMPOUND												
Rate 1000 g/ha	123	124	125	139	154	177	183	184	244	247	248	274	279	280	302	306	307	308	309	310	317	322
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	6	0	9
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Tabl B COMPOUND

Rate 1000 g/ha	331	332	333	365	447	448	587	599	600	616	617	623	662	677	678	679	680	681
Pre-emergence																		
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B COMPOUND

Rate 1000 g/ha	1	2	3	4	5	6	7	8	9	12	13	99	127	157	176	177	183	184	247	279	280	302	365	447	448
Postemergence																									
B. signalgrass	6	2	0	4	4	7	6	3	0	0	6	4	0	-	2	0	0	3	0	0	0	0	0	2	0
Barnyardgrass	0	0	0	4	4	8	0	0	0	0	0	8	-	0	0	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	0	8	4	3	4	3	-	0	0	-	0	-	9	-	-	-	0	0	0	0	-	-	-
Blackgrass	8	9	3	6	8	7	6	5	3	0	8	5	0	-	7	3	0	7	0	6	0	6	0	7	2
Cocklebur	0	0	2	8	8	0	2	2	4	0	0	4	0	-	6	0	0	2	0	0	0	0	0	0	0
Corn	0	8	0	0	0	4	0	3	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	9	4	7	8	6	7	5	6	0	0	9	8	0	-	9	0	0	2	0	-	0	1	0	0	0
Ducksal d	0	0	0	3	0	0	0	0	0	0	0	3	-	0	0	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	8	8	6	7	7	6	4	0	0	7	2	0	-	7	0	0	3	0	4	0	7	0	0	0
Morningglory	0	5	0	3	9	7	3	6	2	0	0	9	0	-	7	1	4	9	4	3	0	2	0	10	8
Nutsedge	0	0	0	0	0	-	-	-	-	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0
Rape	4	0	0	3	5	2	0	0	0	0	1	7	0	-	0	0	0	3	0	0	0	0	0	0	0
Redroot pigweed	9	0	0	8	8	4	0	5	3	0	0	7	0	-	1	2	0	6	0	4	3	3	0	0	0
Ric	0	0	0	0	0	3	0	0	0	0	0	0	-	0	0	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	0	0	0	4	2	3	0	0	0	0	0	3	-	0	0	-	-	-	-	-	-	-	-	-	-
Soybean	2	4	2	5	6	6	5	5	1	1	3	3	0	-	4	3	2	4	1	4	5	5	3	6	6
Sugarbeets	5	0	0	4	7	3	2	2	0	0	0	5	0	-	4	0	0	0	0	4	0	2	0	0	0
Velvetleaf	0	0	0	7	7	1	0	1	0	0	0	7	0	-	3	0	1	2	0	0	0	0	0	0	2
Wheat	0	0	0	0	2	0	2	3	0	0	0	2	0	-	4	3	0	3	0	1	0	1	0	0	0
Wild oats	0	0	0	0	1	4	3	3	0	0	2	3	0	-	4	2	0	5	0	0	0	0	0	0	4

Table B COMPOUND

Rate 1000 g/ha	587	599	600	616	617	623	662	677	678	679	680	681	736	775	777	778
Postemergence																
B. signalgrass	5	0	0	5	3	0	2	1	4	0	3	0	7	9	8	6
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	7	-	0	-	-	-	-	0	0	-	-	-	-	7	6	7
Blackgrass	-	6	0	-	6	7	6	4	6	1	3	4	7	4	4	4

Cocklebur	0	0	0	3	3	0	5	1	3	1	0	0	10	0	0	0
Corn	0	0	0	0	0	0	1	0	0	0	1	0	4	0	0	0
Crabgrass	3	0	3	8	7	3	8	6	-	2	9	2	6	9	-	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	4	4	3	7	6	2	8	5	7	5	8	3	6	9	9	9
Morningglory	9	6	0	10	6	10	7	-	-	2	7	-	7	8	8	8
Nutsedge	0	0	0	-	0	-	-	0	-	0	-	-	5	0	3	3
Rape	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0	3
Redroot pigweed	0	0	0	3	0	5	0	4	5	2	5	7	3	6	8	6
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	6	4	4	4	7	3	-	7	2	-	-	3	6	6	6	7
Sugarbeets	0	0	0	2	0	0	0	1	0	0	2	7	0	0	7	9
Velvetleaf	2	3	0	1	2	2	0	3	6	3	4	2	4	3	5	3
Wheat	3	0	0	0	0	1	0	0	2	0	0	0	2	9	3	2
Wild oats	0	0	0	-	0	2	1	0	3	0	1	1	3	0	3	2

Table B COMPOUND

Rate 1000 g/ha	1	2	3	4	5	6	7	8	9	12	13	99	127	176	177	183	184	247	279	280	302	365	447	448	587
Preemergence																									
B. signalgrass	8	6	0	10	8	5	3	6	0	6	8	6	0	3	5	0	5	0	0	0	7	0	6	4	10
Bedstraw	0	0	0	6	0	0	0	0	0	0	3	0	0	6	10	7	2	0	0	0	0	0	-	0	3
Blackgrass	4	7	0	10	8	7	2	4	0	4	9	7	0	7	7	1	7	0	0	0	6	0	3	4	10
Cocklebur	-	-	0	0	0	2	0	0	0	0	-	7	-	0	-	0	3	0	0	0	0	0	0	-	0
Corn	7	8	0	0	0	5	0	3	3	0	0	2	0	2	0	0	2	0	0	0	0	0	0	2	4
Crabgrass	9	6	2	10	7	10	8	9	3	6	8	10	7	10	8	0	9	3	4	0	7	8	9	9	10
Giant foxtail	9	10	10	10	10	9	9	10	7	8	8	10	9	10	10	6	10	7	7	0	10	9	10	9	10
Morningglory	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	2	0	0	0	0	0	2	0	3
Nutsedge	-	-	-	0	0	0	0	0	0	0	0	10	-	10	0	0	-	-	0	0	0	0	0	0	0
Rape	0	0	0	3	0	0	0	0	0	0	0	6	0	3	0	0	0	0	0	0	8	0	0	0	2
Redroot pigweed	2	0	0	8	10	7	2	7	0	0	3	10	10	0	0	0	2	0	0	0	3	0	0	0	3
Soybean	0	3	0	1	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	-	0	2
Sugarbeets	0	0	0	4	0	0	0	0	0	0	0	6	0	6	0	0	2	0	0	0	4	0	0	0	3
Velv tleaf	3	2	0	0	0	4	0	4	0	0	2	0	0	5	0	0	3	0	0	0	4	0	0	0	4
Wheat	0	0	0	0	0	3	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	7
Wild oats	2	4	0	8	6	6	0	3	0	0	7	7	8	5	10	0	4	0	0	0	6	0	10	5	10

Table B COMPOUND

Rate 1000 g/ha	599	600	616	617	623	662	677	678	679	680	681	697	698	723	724	736	775	777	778
Pre mergence																			
B. signalgrass	3	0	6	8	4	9	9	0	0	0	4	9	4	6	0	9	-	-	-
Bedstraw	8	0	4	0	-	-	-	-	-	-	-	0	0	0	0	-	2	3	10
Blackgrass	8	0	8	10	2	9	4	1	5	4	6	10	9	6	2	10	10	10	10
Cockl bur	3	0	0	0	0	9	0	0	0	0	-	0	0	0	0	2	0	-	0
Corn	0	0	2	0	0	5	0	0	2	0	0	0	0	0	0	9	4	0	2
Crabgrass	8	0	6	8	0	9	9	3	3	3	8	9	9	9	9	9	10	10	10
Giant foxtail	10	0	9	10	9	10	10	6	8	7	9	10	10	10	10	8	10	10	10
Morningglory	0	0	0	0	0	3	0	1	0	0	0	5	0	0	0	6	5	7	0
Nutsedge	0	0	0	8	0	10	0	0	-	0	0	0	-	0	0	8	9	1	10
Rape	3	0	6	0	2	4	3	0	0	0	0	0	8	2	0	2	7	7	6
Redroot pigweed	4	0	10	0	5	7	8	4	6	7	5	0	0	5	3	2	10	9	10
Soybean	0	3	5	1	0	3	0	0	0	0	0	0	3	0	0	3	2	0	7
Sugarbeets	2	0	7	0	7	0	7	0	0	0	0	0	0	0	0	5	3	3	7
Velvetleaf	0	0	5	0	0	2	0	5	0	4	0	2	0	0	0	3	4	3	3
Wheat	0	0	0	2	3	5	0	0	0	0	0	7	6	0	0	9	9	9	8
Wild oats	0	0	10	9	2	9	2	0	0	2	3	9	10	8	0	10	9	9	9

Table B	COMPOUND																								
Rate 500 g/ha	7	18	30	35	36	46	47	69	70	71	72	78	86	87	93	94	103	105	107	108	109	111	113	116	117	118
Pre-emergence																										
Barnyardgrass	0	8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ducksalad	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	6	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 500 g/ha	119	121	122	123	124	125	129	131	139	146	154	165	166	177	180	181	182	183	184	185	186	187
Pre-emergence																						
Barnyardgrass	0	8	0	0	0	0	9	9	0	5	0	1	0	0	0	0	0	0	6	0	0	0
Ducksalad	0	0	0	0	0	0	5	9	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	6	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	3	0	0	0	0	9	8	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 500 g/ha	189	190	191	192	193	194	195	196	197	198	201	202	203	204	205	206	207	208	210	211	212	214
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	7	0	0	0	0	0

Ducksalad	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	2	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 500 g/ha	215	216	218	219	220	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238
Pre-emergence																						
Barnyardgrass	0	0	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 500 g/ha	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	264
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 500 g/ha	265	266	267	268	269	270	271	272	273	274	276	277	278	279	280	281	282	283	284	286	290	291
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	9	0	3	0	8	9	0	0	0	2	9	6	9	4	5	6
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	4	5	0	0	0	0

Table B									COMPOUND													
Rate 500 g/ha	293	294	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316
Pre-emergence																						
Barnyardgrass	5	9	0	0	9	0	0	0	0	4	0	0	0	0	0	7	0	0	0	0	0	9
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Rice	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	9

Table B									COMPOUND													
Rate 500 g/ha	317	319	320	321	323	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341
Pre-emergence																						
Barnyardgrass	0	2	0	0	0	0	9	0	0	0	0	0	0	0	0	4	0	5	9	9	9	9
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	3

Rice	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	1	0	2
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	9
Table B	COMPOUND																					
Rate 500 g/ha	346	350	351	353	354	358	365	366	367	368	369	370	371	372	373	374	375	376	378	379	380	381
Pre-emergence																						
Barnyardgrass	0	0	0	9	0	9	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Rice	0	0	0	4	0	8	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	7	0	8	0	0	0	4	0	0	3	0	0	0	0	0	0	0	0	0
Table B	COMPOUND																					
Rate 500 g/ha	382	383	384	385	387	388	389	390	391	393	394	395	401	402	403	405	406	407	408	409	410	411
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	9	0	0	8	0	0	9	7	0	0	0	0	3	9	9
Ducksalad	0	0	0	0	0	0	3	3	0	0	3	0	0	0	0	0	0	0	0	0	2	2
Rice	0	0	0	0	0	0	-	4	0	0	1	0	0	2	0	0	0	0	0	0	5	0
S. Flatsedge	0	0	0	0	0	0	0	7	0	0	8	0	0	2	6	0	0	0	0	2	9	9
Table B	COMPOUND																					
Rate 500 g/ha	414	437	438	439	441	443	444	445	446	447	448	449	451	452	453	454	455	456	457	458	459	460
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B	COMPOUND																					
Rate 500 g/ha	461	462	463	465	466	467	468	469	470	471	472	473	474	476	477	478	479	480	482	485	486	487
Pre- mergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B	COMPOUND																					
Rate 500 g/ha	488	489	490	492	493	494	495	496	498	499	509	521	528	529	531	532	538	539	546	550	552	556
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	9	0	0	0	0	0	1
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	8	-	0	-	0	-	0

S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 500 g/ha	558	560	561	567	568	570	577	580	586	587	588	589	590	591	592	593	594	595	596	598	599	600
Pre-emergence																						
Barnyardgrass	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 500 g/ha	601	602	603	604	605	606	607	608	609	610	611	612	613	615	616	617	618	619	620	621	622	623
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	8	2	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 500 g/ha	624	625	627	628	629	630	631	632	633	634	636	637	638	639	640	641	642	643	645	646	647	649
Pre-emergence																						
Barnyardgrass	0	0	8	0	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Ducksalad	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 500 g/ha	650	651	655	657	658	659	660	661	662	663	664	665	666	667	668	671	674	675	676	677	678	679
Pre-em rgence																						
Barnyardgrass	0	0	0	0	0	7	0	0	0	0	0	6	5	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																				
Rate 500 g/ha	680	681	692	694	695	696	697	699	701	702	705	706	715	720	721	724	740	741	758	765	793
Pre-emergence																					
Barnyardgrass	0	0	9	0	0	0	0	8	0	0	2	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	100	0	0	0	0	9	3	0	0	0	0	0	0	0	0	0	0	0	8
Rice	0	0	8	0	0	0	0	4	-	0	2	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	100	0	0	0	0	8	0	0	0	0	0	0	0	0	0	8	0	0	8

Table B	COMPOUND																											
Rate 500 g/ha	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	25	26	27	28	29	30	31
Postemergence																													
B. signalgrass	7	0	0	2	0	5	3	0	0	4	0	0	5	0	0	0	0	2	0	0	0	3	2	-	-	-	-	-	-
Barnyardgrass	0	0	0	4	2	0	0	0	0	0	0	0	0	-	0	0	9	10	0	0	0	8	8	0	9	10	0	0	0
Bedstraw	0	0	0	7	4	0	0	3	0	0	0	0	0	1	4	0	7	9	8	5	6	8	7	-	-	-	-	-	-
Blackgrass	2	8	0	6	4	7	3	2	2	7	0	0	4	3	3	2	5	3	2	2	0	6	7	-	-	-	-	-	-
Cocklebur	0	0	0	6	5	0	0	1	0	3	0	0	0	0	8	0	3	2	0	0	7	2	5	-	-	-	-	-	-
Corn	0	6	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0	0	-	-	-	-	-	-
Crabgrass	8	0	6	8	6	5	3	0	0	9	0	0	9	8	8	0	9	9	-	7	2	10	9	-	-	-	-	-	-
Ducksalad	0	0	0	2	0	0	0	0	0	0	0	0	0	-	0	0	0	7	0	0	0	0	0	0	0	4	0	0	0
Giant foxtail	8	7	7	4	4	5	5	2	0	8	0	0	7	3	0	3	5	3	1	1	2	8	8	-	-	-	-	-	-
Morningglory	0	0	0	3	-	5	0	2	0	3	0	0	0	6	7	3	7	3	2	8	8	-	2	-	-	-	-	-	-
Nutsedge	0	0	0	0	0	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-
Rape	2	0	0	2	4	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	2	0	-	-	-	-	-	-
Redroot pigweed	8	0	0	7	7	0	0	0	3	0	0	0	0	6	6	0	6	6	5	4	0	6	4	-	-	-	-	-	-
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	3	5	0	2	0	0	3	0	2	3	0	0	0
S. Flatsedge	0	0	0	2	0	0	0	0	0	0	0	0	0	-	0	0	0	9	0	6	0	0	2	0	9	10	0	0	0
Soybean	1	1	1	4	5	5	2	5	0	4	0	0	2	2	2	3	5	6	4	4	7	3	3	-	-	-	-	-	-
Sugarbeets	0	0	0	4	4	0	2	0	0	0	0	0	0	2	6	0	3	5	5	3	0	4	0	-	-	-	-	-	-
Velvetleaf	0	0	0	4	5	0	0	0	0	4	0	0	0	5	5	3	2	2	0	0	7	0	0	-	-	-	-	-	-
Wheat	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
Wild oats	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	-	-	-	-	-	-

Table B	COMPOUND																											
Rate 500 g/ha	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Postemergence																													
B. signalgrass	-	-	0	0	4.	0	0	0	0	0	0	0	0	2	0	0	0	0	-	0	1	0	0	0	0	0	0	0	0
Barnyardgrass	9	6	0	0	5	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0
Bedstraw	-	-	7	6	-	0	5	0	2	-	-	2	0	-	-	-	-	-	-	-	-	-	7	0	0	0	0	0	7
Blackgrass	-	-	9	7	6	0	8	0	7	4	0	4	0	4	6	0	0	0	-	0	0	0	2	0	0	0	0	0	0
Cocklebur	-	-	4	5	4	1	1	0	0	3	0	1	0	5	2	2	2	0	-	0	0	4	2	0	0	0	0	0	0
Corn	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	4	0	0	0	0	0	0	0	0
Crabgrass	-	-	9	7	8	3	9	4	7	7	0	2	0	3	3	2	8	9	-	4	6	10	5	0	0	0	0	4	2
Ducksalad	2	0	0	0	0	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0
Giant foxtail	-	-	8	7	3	0	8	0	3	1	0	0	0	9	6	2	3	9	-	3	4	3	5	0	0	0	0	4	0
Morningglory	-	-	8	8	9	1	10	0	7	6	1	4	1	3	2	6	1	3	-	1	1	6	2	3	1	1	0	1	2

Nutsedge	-	-	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0
Rape	-	-	0	2	0	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	3	0	0	0	0	0	0	4
Redroot pigweed	-	-	7	9	7	0	0	0	-	5	2	6	0	0	0	2	0	0	-	0	0	10	4	0	0	0	0	0	6
Rice	0	4	0	0	2	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	5	0	0	0	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0
Soybean	-	-	0	1	7	1	1	5	4	4	2	3	2	1	2	2	1	1	-	1	2	3	0	2	2	1	2	7	3
Sugarbeets	-	-	0	4	3	2	2	0	2	0	0	3	0	7	4	0	0	0	-	0	0	2	0	0	0	0	0	0	0
Velvetleaf	-	-	2	4	-	0	0	0	1	-	0	0	0	1	2	0	0	0	-	0	0	1	0	0	0	0	0	0	0
Wheat	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	-	0	0	0	0	0	0	0	0	0	0
Wild oats	-	-	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	0	-	0	1	2	0	0	0	0	0	0	0

Table B	COMPOUND																												
Rate 500 g/ha	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
Postemergence																													
B. signalgrass	1	4	0	0	0	0	0	0	-	0	0	0	3	2	8	9	2	6	0	0	8	0	0	-	0	0	2	2	0
Barnyardgrass	0	0	0	0	2	3	0	0	-	-	-	-	0	0	0	0	0	7	9	9	0	0	0	0	0	0	-	-	0
Bedstraw	-	-	-	0	0	2	8	-	6	0	0	0	7	8	0	4	0	8	8	6	5	1	0	-	0	8	8	9	3
Blackgrass	7	2	0	0	0	3	0	2	0	0	0	0	2	3	9	8	4	7	3	5	6	3	0	-	0	3	4	6	0
Cocklebur	1	6	0	0	0	0	1	2	0	0	0	0	2	4	1	4	4	3	2	1	0	0	1	-	0	2	2	5	2
Corn	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	-	0	0	2	0	1
Crabgrass	0	7	2	0	0	0	0	0	1	0	0	0	6	7	9	9	0	9	8	9	9	0	0	-	0	9	9	9	2
Ducksalad	0	0	0	0	0	2	0	0	-	-	-	-	0	0	0	0	0	0	3	2	0	0	0	0	0	0	-	-	0
Giant foxtail	0	2	2	0	0	0	0	0	1	0	0	0	4	2	8	9	2	4	4	7	7	0	0	-	0	5	6	3	2
Morningglory	8	6	4	0	2	2	6	3	0	0	0	0	4	4	3	7	0	10	8	10	6	10	0	-	0	8	9	10	2
Nutsedge	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0
Rape	3	0	0	0	0	0	2	0	0	0	0	0	-	2	0	2	3	4	3	3	0	0	0	-	0	4	3	3	0
Redroot pigweed	4	0	2	0	0	4	4	0	0	0	0	0	0	0	0	4	0	6	4	4	2	0	0	-	0	7	2	5	5
Rice	0	0	0	0	3	0	0	0	-	-	-	-	0	0	2	3	0	2	3	2	0	0	0	0	0	0	-	-	0
S. Flatsedge	0	0	0	0	0	3	0	0	-	-	-	-	0	0	0	0	3	4	10	3	0	0	0	0	0	0	-	-	0
Soybean	5	3	3	1	1	3	1	3	3	0	0	0	3	1	2	2	1	4	2	2	3	1	0	-	0	3	5	1	1
Sugarbeets	6	5	3	0	0	0	2	3	0	0	0	0	0	0	0	3	0	7	6	7	3	2	0	-	0	6	8	7	6
Velvetleaf	0	7	5	0	4	2	0	3	2	0	0	0	5	4	0	4	0	4	3	0	2	0	4	-	0	2	1	0	3
Wheat	0	0	2	0	0	0	0	0	0	0	0	0	2	3	4	3	4	0	0	0	0	0	0	-	0	0	2	0	0
Wild oats	0	3	2	0	0	0	0	0	0	0	0	0	6	2	2	5	3	2	0	0	0	0	0	-	0	0	3	0	0

Table B	COMPOUND																							
Rate 500 g/ha	90	91	92	93	94	95	96	97	99	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115
Postemergence																								

B. signalgrass	0	8	7	9	2	5	0	0	2	0	0	2	0	3	0	8	6	8	3	0	4	8	7	8
Barnyardgrass	0	-	-	0	9	4	0	0	5	0	0	-	-	0	0	-	0	0	0	0	0	0	0	0
Bedstraw	-	-	-	7	-	2	0	3	8	0	3	-	6	3	7	9	6	-	-	-	-	-	7	-
Blackgrass	0	8	8	8	6	5	0	5	6	0	0	4	6	8	3	8	8	8	8	7	7	8	8	7
Cocklebur	5	4	3	4	3	2	2	1	3	0	0	0	3	4	4	3	2	5	3	3	2	4	0	2
Corn	0	5	4	5	0	0	0	0	0	0	2	2	0	2	0	6	0	5	4	0	0	6	0	0
Crabgrass	4	9	9	9	9	8	8	-	8	0	5	9	8	9	6	9	9	9	8	9	9	9	9	6
Ducksalad	0	-	-	0	2	0	0	2	2	0	0	-	-	0	0	-	0	0	0	0	0	0	0	0
Giant foxtail	1	9	9	9	8	6	3	4	7	0	2	7	8	8	3	8	8	9	8	9	8	9	9	9
Morningglory	4	9	10	10	10	8	2	3	5	1	3	10	10	4	10	3	3	5	5	8	10	10	8	6
Nutsedge	0	0	2	3	0	0	0	0	0	0	0	0	0	2	0	6	4	4	0	0	0	2	0	0
Rape	0	10	6	5	3	0	0	3	6	0	0	3	2	2	0	8	2	6	6	4	4	7	7	0
Redroot pigweed	7	8	5	7	4	5	0	5	7	0	0	4	7	3	6	8	3	8	6	6	5	7	3	4
Rice	0	-	-	4	0	4	2	3	0	0	0	-	-	0	0	-	0	0	0	0	0	0	0	0
S. Flatsedge	0	-	-	6	9	5	3	2	2	0	0	-	-	0	0	-	0	0	0	0	0	0	0	0
Soybean	4	5	5	7	5	1	1	2	4	3	0	6	5	6	1	5	5	7	7	5	7	7	7	4
Sugarbeets	3	6	6	5	3	4	0	0	5	0	0	3	3	0	0	7	2	7	3	4	3	6	5	3
Velvetleaf	-	-	-	6	6	0	0	3	5	0	3	4	3	4	2	7	5	6	2	2	1	8	3	0
Wheat	0	6	6	5	0	0	0	0	0	0	0	0	0	2	0	8	2	6	1	0	0	6	0	0
Wild oats	0	5	5	5	1	3	0	0	0	0	0	0	2	4	0	9	3	7	2	2	1	6	2	0

Table B

Table B	COMPOUND																					
Rate 500 g/ha	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137
Postemergence																						
B. signalgrass	9	9	9	5	8	3	0	5	0	0	0	0	0	6	8	9	7	2	2	0	3	8
Barnyardgrass	4	3	-	-	0	6	0	0	0	0	0	0	0	-	-	-	-	-	-	0	0	-
Bedstraw	-	-	-	8	2	6	3	-	0	0	0	0	0	3	8	9	7	7	-	-	-	-
Blackgrass	9	9	9	8	8	6	6	7	0	0	0	0	0	3	8	9	9	4	7	0	5	8
Cocklebur	5	1	0	0	4	5	3	1	0	0	0	0	0	0	3	5	0	3	1	0	4	4
Corn	7	7	3	0	4	0	0	0	0	0	0	0	0	4	3	7	6	0	0	0	0	5
Crabgrass	9	9	9	8	9	9	5	9	0	0	0	0	0	9	9	9	9	4	9	-	9	9
Ducksalad	0	0	-	-	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	0	0	-
Giant foxtail	9	9	9	8	8	8	9	9	0	0	0	0	0	9	9	9	9	4	3	0	7	9
Morningglory	7	10	7	8	8	9	4	10	2	2	0	0	0	8	3	10	7	8	8	1	10	8
Nutsedge	9	7	0	0	-	0	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0	4
Rape	9	6	0	4	0	3	4	2	0	0	0	0	0	0	2	9	0	0	0	0	4	7
Redroot pigweed	8	6	0	6	3	5	5	2	0	0	0	0	0	3	6	10	2	2	0	0	6	6

Rice	0	0	-	-	0	3	0	0	0	0	0	0	0	-	-	-	-	-	-	0	0	-
S. Flatsedge	0	0	-	-	0	6	0	0	0	0	0	0	0	-	-	-	-	-	-	0	0	-
Soybean	8	7	2	6	6	6	5	4	5	4	0	0	0	4	5	8	6	3	1	3	5	8
Sugarbeets	8	7	2	4	0	4	2	2	0	0	0	0	0	0	4	8	2	2	2	0	8	6
Velvetleaf	8	8	0	3	6	4	3	-	0	0	0	0	0	0	5	8	3	5	4	0	2	5
Wheat	8	8	2	3	4	0	0	4	0	0	0	0	0	2	8	6	6	2	0	0	0	6
Wild oats	8	8	2	6	2	0	0	2	0	0	0	0	0	2	8	10	3	0	0	0	3	5

Table B									COMPOUND													
Rate 500 g/ha	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	157	158	159	160	161
Postemergence																						
B. signalgrass	8	7	1	0	0	5	3	2	9	8	7	0	0	7	0	0	2	0	0	0	0	7
Barnyardgrass	-	-	8	3	9	10	8	9	9	9	4	0	0	8	0	0	0	0	0	0	0	-
Bedstraw	9	5	6	4	4	8	5	5	8	8	6	0	0	7	0	0	-	-	-	0	0	4
Blackgrass	9	8	6	0	3	8	8	6	8	8	7	0	0	9	2	0	0	2	5	0	0	4
Cocklebur	3	2	4	0	0	4	0	0	4	0	3	0	0	2	0	0	2	0	0	0	0	3
Corn	7	2	0	0	0	0	0	0	0	8	0	0	0	6	0	0	0	0	0	0	0	0
Crabgrass	9	9	9	9	5	9	9	8	9	9	9	0	5	9	3	0	5	7	4	0	0	9
Ducksalad	-	-	0	0	0	5	0	2	6	3	0	0	0	2	0	0	0	0	0	0	0	-
Giant foxtail	9	9	6	2	3	7	6	4	9	9	9	0	4	8	3	0	3	4	5	0	0	7
Morningglory	10	9	8	3	7	8	3	10	9	3	5	0	0	6	0	0	2	1	2	4	0	10
Nutsedge	-	4	0	0	0	0	0	0	6	2	0	0	0	5	0	0	0	0	0	0	0	0
Rape	7	4	2	0	0	3	4	3	5	5	4	0	0	2	0	0	0	0	0	0	0	4
Redroot pigweed	8	4	3	9	0	6	2	2	8	5	5	0	0	7	0	0	6	0	4	0	0	5
Rice	-	-	4	0	4	4	4	0	7	5	0	0	0	0	0	0	0	0	0	0	0	-
S. Flatsedge	-	-	0	0	4	8	7	8	9	9	2	0	0	8	0	0	0	0	0	0	0	-
Soybean	4	5	5	3	3	5	3	5	8	8	5	0	3	4	1	0	3	2	5	3	0	4
Sugarbeets	8	2	0	0	0	6	4	0	6	2	4	0	0	3	0	0	0	0	0	0	0	7
Velvetleaf	7	6	2	4	2	2	0	2	6	3	1	0	0	5	0	0	0	0	0	0	0	6
Wheat	8	4	0	0	0	0	0	0	6	7	5	0	0	8	0	0	0	0	0	0	0	0
Wild oats	8	4	1	0	0	0	1	2	7	7	5	0	0	8	0	0	1	0	0	0	0	0

Table B									COMPOUND													
Rate 500 g/ha	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183
Postemergence																						
B. signalgrass	4	6	0	8	0	0	0	7	10	0	0	0	0	0	0	0	2	0	0	0	0	0
Barnyardgrass	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	0	-	-	-	-	-	-
Bedstraw	6	9	-	8	5	-	-	-	2	-	-	-	-	0	8	6	0	10	0	0	0	3

Blackgrass	6	8	0	8	8	5	7	9	9	0	5	2	3	0	3	2	-	6	0	0	0	0
Cocklebur	2	3	0	0	0	2	2	3	0	3	2	2	3	3	3	3	0	1	0	0	0	0
Corn	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	8	9	9	9	4	9	9	9	9	7	9	8	8	0	6	3	2	9	0	0	0	0
Ducksalad	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	2	-	-	-	-	-	-
Giant foxtail	3	8	7	8	4	0	3	9	8	0	0	0	1	0	6	0	2	4	0	0	0	0
Morningglory	10	8	2	4	2	8	10	7	2	2	8	10	5	4	3	4	3	5	0	0	0	2
Nutsedge	2	3	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	4	0	2	-	0	0	3	3	0	0	0	2	0	0	0	0	2	0	0	0	0
Redroot pigweed	0	3	0	4	3	7	0	3	6	5	7	0	6	0	0	3	7	8	0	0	0	0
Rice	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	0	-	-	-	-	-	-
S. Flatsedge	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	0	-	-	-	-	-	-
Soybean	4	3	2	6	3	5	2	6	7	3	5	4	4	1	4	4	2	1	0	0	0	2
Sugarbeets	0	5	0	6	0	0	0	0	4	2	0	5	6	0	0	0	0	6	0	0	0	0
Velvetleaf	4	6	0	1	0	2	1	0	5	3	2	0	0	3	2	3	0	3	0	0	0	0
Wheat	0	5	0	3	3	0	0	2	7	0	0	0	0	3	2	4	2	0	0	0	0	0
Wild oats	4	3	0	3	2	0	0	2	6	0	0	0	0	0	0	0	0	2	0	0	0	0
Table B	COMPOUND																					
Rate 500 g/ha	184	185	187	188	189	190	191	192	193	194	195	196	197	198	199	201	202	203	204	205	206	207
Postemergence																						
B. signalgrass	0	0	0	0	0	0	1	2	0	3	1	0	0	0	-	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-
Bedstraw	6	3	0	5	0	0	0	0	0	0	7	0	-	-	2	0	4	0	7	0	0	5
Blackgrass	4	0	0	3	0	0	3	-	0	3	6	0	0	0	9	4	6	0	7	0	0	4
Cocklebur	1	2	0	0	0	0	3	5	0	2	2	0	0	0	3	0	2	0	1	2	0	3
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	2	1	0	3	0	0	6	2	0	2	5	0	2	0	8	0	4	0	5	1	0	3
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Giant foxtail	2	1	0	4	0	0	2	1	0	2	3	0	3	0	7	0	2	0	3	0	0	2
Morningglory	7	2	0	0	0	0	8	6	2	2	3	0	0	3	8	3	9	0	8	2	5	3
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	6	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	4	0	0	0	0	2
Redroot pigweed	7	4	0	3	0	0	0	7	0	0	4	0	0	0	6	3	7	0	7	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-
Soybean	3	3	0	3	0	0	4	3	2	1	5	0	0	1	7	3	3	0	7	2	2	5

Sugarbeets	6	0	0	7	0	0	0	5	0	0	2	0	0	0	2	4	4	0	0	0	0	2
Velvetleaf	5	3	0	0	0	0	2	4	0	0	2	0	0	0	5	3	0	0	2	0	0	2
Wheat	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Wild oats	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 500 g/ha	208	210	211	212	214	215	216	218	219	220	222	223	224	225	226	227	228	229	230	231	232	233
Postemergence																						
B. signalgrass	3	0	0	7	0	3	8	7	8	8	1	0	0	9	9	0	0	0	0	0	8	1
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	5	-	8	7	8	8	-	8	8	9	5	5	4	0	7	8	2	0	0	0	2	5
Blackgrass	7	2	4	7	5	5	8	8	8	8	4	1	4	8	9	7	0	0	0	0	7	5
Cocklebur	0	2	0	5	0	0	3	4	4	5	0	2	1	0	2	3	0	0	0	0	4	2
Corn	0	0	0	0	0	0	3	0	5	6	0	0	0	6	6	0	2	0	0	0	0	0
Crabgrass	3	0	3	9	5	2	7	9	8	9	2	3	0	8	8	3	0	0	2	2	2	6
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	1	0	3	9	4	5	6	8	9	8	1	1	0	9	7	0	0	0	1	0	3	6
Morningglory	3	7	6	8	7	3	10	9	7	8	3	6	6	6	7	10	9	0	7	4	8	8
Nutsedge	0	0	0	0	0	0	0	0	0	0	-	0	0	2	4	0	0	0	0	0	0	0
Rape	0	0	3	3	3	0	3	7	7	4	0	0	0	2	6	0	0	0	0	0	2	3
Redroot pigweed	0	6	5	7	3	6	3	7	8	4	0	5	7	2	0	7	2	0	0	0	4	4
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	3	4	4	3	1	2	7	7	7	2	4	2	4	6	5	1	2	5	1	4	5
Sugarb ets	0	4	2	5	0	0	2	4	7	2	0	3	4	2	2	5	4	0	0	0	3	4
Velvetleaf	1	2	3	7	0	0	0	3	4	2	3	3	4	3	0	3	0	2	0	0	3	3
Wheat	0	0	0	7	6	8	2	0	7	6	0	0	0	8	9	5	0	0	0	0	0	0
Wild oats	0	0	0	4	2	3	0	2	6	2	0	2	0	2	3	2	0	0	0	0	0	2

Table B	COMPOUND																					
Rate 500 g/ha	234	235	236	237	238	239	240	241	242	243	245	246	247	248	249	251	253	254	255	257	258	259
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	6	9	9	8	1	0	0	0	2	0	0	8	0	8	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	4	3	8	3	5	7	8	5	9	9	0	0	0	9	0	4	8	0	8	-
Blackgrass	0	0	0	0	5	3	5	9	9	9	8	8	0	0	0	8	0	0	9	2	7	0
Cocklebur	3	0	0	0	0	1	1	1	7	0	1	2	0	0	0	3	0	0	2	0	1	3
Corn	0	0	0	0	0	0	0	0	6	7	7	0	0	0	0	0	0	0	6	0	0	0

Crabgrass	0	0	0	0	5	6	4	9	9	9	8	3	0	0	0	9	0	0	3	4	5	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	0	2	6	2	8	9	8	8	8	0	0	0	8	0	0	8	2	7	0
Morningglory	2	7	6	6	5	9	10	8	8	8	9	9	2	0	3	9	0	9	8	8	10	8
Nutsedge	0	0	0	0	0	0	0	6	5	7	0	3	0	0	0	0	0	0	6	0	0	0
Rape	0	0	0	0	6	0	0	4	8	3	5	0	0	0	0	0	0	2	3	5	3	-
Redroot pigweed	0	0	0	3	5	7	7	7	8	7	9	3	0	0	3	4	0	6	8	6	3	7
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	0	3	1	2	3	3	4	6	8	5	4	0	1	4	6	0	2	6	4	6	6
Sugarb ets	0	0	0	0	0	0	3	5	8	5	7	0	0	0	2	2	0	7	3	5	2	3
Velvetleaf	0	0	3	2	2	3	3	1	7	7	7	3	0	0	0	0	0	2	1	1	0	1
Wheat	0	0	0	0	0	0	2	8	8	8	8	4	0	0	0	2	0	0	8	0	6	3
Wild oats	0	0	0	0	0	0	2	2	8	4	8	0	0	0	0	0	0	0	4	0	3	0

Table B	COMPOUND																					
Rate 500 g/ha	260	261	262	263	265	266	267	268	269	270	271	272	273	274	276	277	278	279	280	281	282	283
Postemergence																						
B. signalgrass	0	0	0	0	0	2	3	-	0	0	5	0	0	0	0	3	0	0	0	0	2	2
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	-	-	8	6	7	-	7	0	8	4	0	0	3	8	8	0	0	-	8	6
Blackgrass	0	5	0	5	7	8	8	-	5	0	8	6	4	0	8	8	0	4	0	2	8	7
Cocklebur	0	1	0	0	0	2	3	0	2	0	4	1	0	0	0	2	3	0	0	0	2	2
Corn	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	2	3	5	7	0	1	0	5	0	3	0	7	6	0	0	0	0	0	1
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	3	2	7	7	0	2	0	7	0	2	0	6	6	0	1	0	0	2	7
Morningglory	4	6	7	7	8	8	8	7	7	0	8	7	3	0	8	9	4	2	0	5	9	10
Nutsedge	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	3	7	2	-	0	0	6	0	0	0	0	3	0	0	0	0	8	7
Redroot pigweed	6	2	4	0	4	7	6	-	6	0	8	4	4	1	2	5	4	2	1	6	8	7
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	4	4	1	4	8	6	-	3	2	6	1	4	5	7	8	1	4	5	3	4	7
Sugarbeets	3	0	0	0	3	7	4	-	0	0	6	0	0	1	2	5	0	0	0	4	7	2
Velvetleaf	1	1	2	2	3	5	3	0	3	0	3	0	2	0	0	1	2	0	0	1	3	3
Wheat	0	2	0	2	0	6	4	-	4	0	0	0	0	0	0	0	0	0	0	0	0	0

Wild oats	0	0	0	0	0	2	4	-	3	0	3	0	0	0	0	2	0	0	0	0	0	0
Table B									COMPOUND													
Rate 500 g/ha	284	286	292	293	294	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313
Postemergence																						
B. signalgrass	1	2	0	7	0	0	0	8	0	0	0	0	0	0	0	0	0	0	7	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	9	6	0	9	9	-	-	-	0	-	0	0	-	-	0	0	0	0	5	2	-	-
Blackgrass	8	8	0	9	8	0	0	9	0	0	2	0	4	0	0	0	0	2	9	0	0	0
Cocklebur	2	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7	0	0	0
Corn	0	0	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	1	6	0	9	2	0	0	5	0	0	0	0	3	0	0	0	0	0	9	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	3	0	9	4	0	0	8	0	0	4	0	2	0	0	0	0	0	8	0	0	0
Morningglory	8	8	2	7	9	0	3	9	0	0	2	0	6	2	5	3	2	2	8	10	0	7
Nutsedge	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0
Rape	8	6	0	0	4	0	0	8	0	0	0	0	0	0	0	0	0	0	5	0	0	0
Redroot pigweed	8	7	0	6	4	0	0	8	0	0	2	3	6	6	0	0	0	0	7	0	0	2
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	5	2	1	5	6	3	4	7	2	0	5	3	5	5	2	3	2	3	6	3	3	4
Sugarbeets	6	2	0	3	0	0	0	7	0	0	2	0	2	0	0	0	0	0	3	0	0	0
Velvetleaf	2	1	0	6	0	0	0	7	0	0	0	0	0	0	0	0	0	0	8	0	0	0
Wheat	0	5	0	7	2	0	0	7	0	0	0	0	0	0	0	0	0	0	8	0	0	0
Wild oats	0	3	0	8	3	0	0	4	0	0	0	0	0	0	0	0	0	0	7	0	0	0
Table B									COMPOUND													
Rate 500 g/ha	314	315	316	317	319	320	321	322	323	325	326	327	328	329	330	331	332	333	334	335	336	337
Postemergence																						
B. signalgrass	3	4	2	8	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	0	-	0	0	4	0	4
Blackgrass	5	8	7	9	3	0	4	8	0	7	1	7	5	0	0	0	0	0	0	0	0	0
Cocklebur	1	0	0	1	0	0	0	4	0	3	2	0	0	4	0	0	0	0	0	0	0	0
Corn	0	5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Crabgrass	4	5	0	8	3	4	8	5	0	0	3	1	2	0	0	0	3	0	0	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	7	7	3	8	0	3	8	4	0	0	2	0	1	0	0	0	0	0	0	0	0	0

Morningglory	6	3	8	6	4	3	9	8	3	8	10	10	10	0	4	0	0	0	0	0	0	0
Nutsedge	3	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	2	2	0	3	0	0	0	2	3	2	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	2	0	5	6	0	7	-	6	0	7	7	7	5	0	0	0	4	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	4	4	7	4	4	3	5	2	3	6	7	6	2	1	0	3	4	2	2	2	2
Sugarbeets	0	0	0	4	0	6	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	3	4	3	0	0	2	0	2	2	0	0	0	0	0	0	0	0	0	0	0
Wheat	3	4	4	6	0	0	0	3	0	5	0	1	0	0	0	0	0	0	0	0	0	0
Wild oats	3	0	4	0	0	0	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0
Table B	COMPOUND																					
Rate 500 g/ha	338	339	340	341	342	343	344	345	348	349	350	351	352	353	354	355	356	357	358	359	360	361
Postemergence																						
B. signalgrass	0	0	0	2	1	7	0	0	7	0	4	4	7	0	2	2	1	7	2	0	7	4
Barnyardgrass	-	-	-	-	9	2	0	0	7	9	5	5	3	-	9	8	7	6	-	0	7	-
Bedstraw	5	8	8	8	5	3	0	0	7	3	-	-	4	-	-	0	3	5	6	0	4	8
Blackgrass	0	2	8	2	4	6	0	0	7	6	7	4	8	9	9	6	7	7	8	2	7	8
Cocklebur	0	0	0	-	0	4	0	0	2	1	3	2	0	1	1	4	0	2	0	1	0	2
Corn	0	0	0	0	0	2	0	0	3	0	0	0	6	0	0	0	3	3	0	0	7	0
Crabgrass	0	2	2	2	3	6	0	0	6	3	7	9	4	3	3	2	3	5	7	0	5	5
Ducksalad	-	-	-	-	4	0	0	0	4	4	3	4	2	-	5	0	2	2	-	0	0	-
Giant foxtail	0	0	6	2	7	9	0	0	9	9	9	9	9	8	9	8	8	9	8	0	8	5
Morningglory	2	10	10	10	9	9	0	0	10	10	9	6	8	10	8	8	10	8	7	0	5	-
Nutsedge	0	0	0	0	0	3	0	0	6	0	0	0	2	0	0	0	0	2	0	0	4	0
Rape	0	5	6	2	4	3	0	0	5	0	2	5	0	4	4	0	0	4	4	0	0	4
Redroot pigweed	0	6	-	6	8	5	2	0	5	4	3	7	4	6	7	3	0	8	6	0	6	7
Rice	-	-	-	-	0	0	0	0	0	0	0	0	3	-	2	0	0	2	0	0	3	-
S. Flatsedge	-	-	-	-	-	0	0	0	7	-	8	8	7	-	9	8	7	8	-	0	8	-
Soybean	2	4	3	3	7	3	2	0	4	2	3	2	4	6	7	3	5	3	7	3	3	5
Sugarbeets	0	0	6	0	0	3	0	0	3	0	0	2	0	6	3	0	0	0	4	0	7	6
Velvetl af	0	0	3	2	0	5	0	0	6	0	6	6	3	2	2	2	0	4	3	2	4	3
Wheat	0	0	0	0	0	5	0	0	4	3	2	2	7	0	0	3	4	7	5	2	6	2
Wild oats	0	0	0	3	0	4	0	0	7	3	5	5	7	2	3	5	3	6	7	0	5	6
Table B	COMPOUND																					
Rate 500 g/ha	363	364	365	367	368	369	370	371	372	373	374	375	376	378	379	380	381	382	383	384	385	387

Postemergence																						
B. signalgrass	5	1	0	4	7	3	6	6	7	0	0	8	0	2	0	0	0	0	0	7	8	8
Barnyardgrass	-	0	-	-	-	2	2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	9	0	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	4	0	0	3	-
Blackgrass	8	2	0	8	8	5	5	8	10	0	-	8	0	-	0	0	0	2	8	-	8	9
Cocklebur	2	2	0	2	5	0	3	0	3	2	0	0	0	1	0	6	0	0	0	0	0	0
Corn	6	3	0	0	7	0	5	1	3	0	0	2	0	0	0	0	0	0	0	0	0	0
Crabgrass	9	2	0	8	8	9	9	9	9	2	3	9	0	2	0	7	0	1	4	8	9	7
Ducksalad	-	0	-	-	-	2	3	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	8	0	8	9	9	9	9	9	6	8	9	0	8	7	9	0	4	6	9	9	9
Morningglory	3	4	0	7	7	10	10	10	10	8	10	6	0	10	10	10	7	0	0	0	5	6
Nutsedge	0	0	0	3	0	3	5	0	0	0	0	6	0	0	0	0	0	0	0	0	0	5
Rape	2	0	0	4	5	3	3	0	5	5	7	2	0	3	0	0	6	0	0	-	0	0
Redroot pigweed	5	0	0	7	7	4	3	5	9	6	6	3	0	2	1	5	2	0	0	0	0	0
Rice	-	0	-	-	-	0	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	3	-	-	-	4	7	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	7	3	2	2	5	1	4	4	3	4	4	2	0	2	2	1	2	5	5	3	2	1
Sugarbe ts	3	1	0	7	3	2	0	0	8	4	4	3	0	0	0	0	0	0	0	0	0	2
Velvetleaf	6	0	0	3	7	3	4	3	2	2	1	4	0	3	0	3	0	0	0	0	0	3
Wheat	6	0	0	6	6	4	3	-	2	0	0	6	0	0	0	0	0	0	0	3	5	0
Wild oats	7	0	0	8	5	4	5	4	8	0	-	8	0	0	0	0	0	0	0	4	3	0

Table B

	COMPOUND																					
Rate 500 g/ha	388	389	390	391	393	394	395	396	397	398	400	401	402	403	404	405	406	407	408	409	410	411
Postemergence																						
B. signalgrass	8	0	8	0	0	9	0	0	8	8	4	0	5	6	6	0	0	0	5	9	7	9
Barnyardgrass	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	6	7	7	0	-	-	4	-	-	9	-	-	8	8	-	-	-	-	9	5	7	8
Blackgrass	10	6	9	0	8	-	5	6	9	9	8	0	9	10	10	5	0	7	10	10	9	9
Cocklebur	0	0	7	0	0	4	0	0	0	0	0	1	5	0	3	0	0	0	3	1	1	3
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	7	3	4
Crabgrass	9	7	9	0	8	9	5	2	9	9	9	3	9	9	8	0	0	3	9	9	10	8
Ducksalad	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	8	10	0	9	9	6	2	9	9	9	6	9	9	9	6	0	8	9	9	9	9
Morningglory	5	10	9	0	0	7	-	8	6	8	6	7	10	10	10	5	2	10	7	10	8	6
Nutsedge	6	0	-	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Rape	0	4	10	0	-	-	-	6	2	2	0	7	9	7	8	2	0	-	2	-	7	8

Redroot pigweed	3	7	9	0	0	7	0	0	6	5	0	2	7	2	7	0	0	0	7	5	2	9
Rice	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	3	5	0	2	5	1	6	6	6	4	1	8	8	7	3	2	2	4	5	6	7
Sugarbeets	4	0	7	0	7	5	0	3	0	0	0	0	2	3	4	0	0	0	6	0	8	7
Velvetleaf	6	0	8	0	0	3	2	0	0	5	0	3	4	6	6	0	0	2	4	0	0	6
Wheat	8	0	7	0	0	4	3	0	4	3	0	0	0	4	3	0	0	0	2	7	4	8
Wild oats	6	0	9	0	0	6	3	0	5	0	0	0	3	5	8	0	0	0	3	4	5	9

Table B	COMPOUND																					
Rate 500 g/ha	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435
Postemergence																						
B. signalgrass	6	6	9	0	2	2	7	10	0	0	0	8	8	0	0	0	8	2	0	6	0	3
Barnyardgrass	-	0	0	8	0	0	0	3	0	0	0	7	0	0	5	7	0	0	0	0	0	0
Bedstraw	-	-	7	6	-	0	5	7	-	-	0	-	9	-	-	-	3	-	-	7	-	0
Blackgrass	7	9	9	0	6	4	6	10	0	2	0	9	8	4	4	3	8	5	4	10	0	8
Cocklebur	0	4	5	0	0	0	0	6	0	0	0	0	0	2	1	0	1	0	0	0	0	0
Corn	0	2	7	0	0	0	0	7	0	0	0	2	4	0	0	0	4	0	0	3	0	0
Crabgrass	9	9	9	2	6	1	8	8	0	1	0	9	9	2	3	3	9	2	6	9	4	8
Ducksalad	-	0	0	3	2	0	0	2	0	0	0	0	0	0	5	6	0	0	0	0	0	0
Giant foxtail	9	9	9	8	9	6	9	9	0	2	0	9	9	4	0	4	9	6	8	8	4	9
Morningglory	8	7	9	9	10	5	10	10	0	8	1	10	9	1	3	3	3	2	2	7	1	9
Nutsedge	0	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	6	0	0	0	0	3
Rape	0	1	3	2	0	0	0	8	0	0	0	3	4	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	3	7	3	0	0	0	8	0	0	0	2	6	0	3	0	3	0	0	3	0	2
Rice	-	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0
S. Flatsedge	-	3	0	9	4	3	0	0	0	0	0	6	0	0	9	9	0	0	0	0	0	0
Soybean	3	7	7	6	6	3	4	8	4	2	2	3	7	2	3	3	3	2	2	2	1	3
Sugarbeets	0	0	2	6	0	0	0	6	0	0	0	4	3	0	0	0	0	0	0	0	0	0
Velvetleaf	0	2	6	0	0	2	0	7	0	0	0	2	2	2	7	2	3	2	2	4	0	0
Wheat	0	3	7	0	0	0	5	7	0	0	0	6	2	0	0	0	0	0	0	3	0	0
Wild oats	2	3	7	0	3	0	2	8	0	0	0	3	2	0	0	0	0	0	3	2	0	3

Table B	COMPOUND																					
Rate 500 g/ha	436	437	438	439	440	441	443	444	445	446	447	448	449	451	452	453	454	455	456	457	458	459
Postemergence																						
B. signalgrass	8	0	0	0	8	0	0	4	0	8	0	0	4	2	0	5	2	5	2	0	3	0
Barnyardgrass	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Bedstraw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Blackgrass	9	0	2	0	8	0	0	7	0	9	2	0	-	6	5	6	2	9	8	0	8	8
Cocklebur	0	1	3	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0	2	0	2	0
Corn	5	0	3	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	2	0
Crabgrass	9	3	9	0	9	0	0	9	7	9	0	0	2	6	6	10	9	9	7	0	9	8
Ducksalad	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	7	9	0	9	0	0	9	2	9	0	0	3	7	7	9	9	9	8	0	9	5
Morningglory	10	9	10	0	-	0	4	3	8	3	7	5	5	3	3	2	10	9	5	0	6	10
Nutsedge	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Rape	4	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	2	0	0	2	4
Redroot pigweed	7	0	0	0	4	0	0	2	4	0	0	0	4	3	0	3	6	8	5	0	0	3
Rice	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	2	6	0	7	0	2	2	2	4	4	5	2	1	2	2	3	4	2	2	4	7
Sugarbeets	0	0	0	0	2	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	2
Velvetleaf	3	0	0	0	2	0	0	3	5	3	0	0	0	0	2	2	3	3	3	0	0	0
Wheat	7	0	0	0	4	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	2	0
Wild oats	3	3	0	0	5	0	0	2	0	3	0	0	4	4	0	0	4	7	0	0	2	0

Table B									COMPOUND													
Rate 500 g/ha	460	461	462	463	465	466	467	468	469	470	471	472	473	474	476	477	478	479	480	482	485	486
Postemergence																						
B. signalgrass	2	0	0	0	0	7	0	0	6	0	6	5	0	4	0	5	8	7	6	0	5	5
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	8	-	-	-	-	-	-	-	6	-	-	-	-	8	-	-	-	-	0	-	6	8
Blackgrass	8	3	0	2	8	9	7	8	9	0	7	8	0	8	2	6	8	7	8	0	8	8
Cocklebur	0	3	0	2	0	1	5	4	3	0	0	1	0	4	0	0	0	0	1	0	0	0
Corn	0	0	0	0	2	2	0	0	4	0	0	3	0	0	0	0	2	4	2	0	0	3
Crabgrass	9	2	0	2	8	9	6	9	9	0	9	8	8	9	0	7	9	9	8	3	8	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	1	0	0	6	9	9	4	9	9	0	8	8	7	8	0	7	9	8	8	2	8	9
Morningglory	8	8	0	2	3	2	-	5	10	1	5	7	2	2	2	10	8	10	8	8	10	2
Nutsedge	0	0	-	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	6	0	2	0	3	0	0	2	0	1	0	0	0	0	0	1
Redroot pigweed	2	0	0	0	3	7	6	7	6	0	5	4	0	6	4	2	6	3	2	3	2	2
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Soybean	4	4	2	1	1	5	2	3	5	1	3	2	1	4	2	2	3	3	4	1	5	4
Sugarbeets	0	0	0	0	0	0	7	0	4	0	0	3	0	0	0	0	0	0	0	0	0	2
Velvetleaf	0	0	0	0	4	1	5	5	2	0	4	2	0	2	2	0	0	1	0	0	4	6
Wheat	0	0	0	0	4	6	0	0	6	0	3	3	0	0	0	0	7	0	-	0	5	5
Wild oats	0	0	0	0	5	0	2	0	5	0	0	3	0	-	0	0	0	0	3	0	4	3
Table B	COMPOUND																					
Rate 500 g/ha	487	488	489	490	492	493	494	495	496	497	498	499	500	501	504	505	506	508	509	510	511	512
Postemergence																						
B. signalgrass	0	7	8	7	0	0	0	0	4	0	0	0	8	7	9	8	0	3	7	6	3	5
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	6	9	-	-	-	-	-	-	-	-	-	-	-	9	9	-	9	-	-	-	-	-
Blackgrass	1	8	8	5	0	0	0	0	5	0	5	4	6	7	8	7	6	6	9	6	2	6
Cocklebur	0	0	0	0	0	0	0	0	1	0	0	4	5	5	6	4	6	4	4	4	0	7
Corn	0	0	4	0	0	0	0	0	0	0	0	0	6	6	6	6	0	3	1	0	0	0
Crabgrass	5	9	9	7	0	4	-	0	2	0	2	0	9	8	10	9	8	9	9	9	9	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	9	9	8	0	0	0	0	0	0	3	2	9	8	9	9	8	8	8	9	9	8
Morningglory	10	8	10	3	8	0	0	7	8	0	4	6	3	4	6	7	5	7	5	6	5	7
Nutsedge	0	2	0	0	0	0	0	0	0	0	0	0	2	2	3	2	0	0	-	0	0	-
Rape	3	0	0	0	0	0	0	0	0	0	0	0	8	7	8	2	7	8	4	9	4	0
Redroot pigweed	3	2	2	2	7	0	0	0	3	0	0	0	10	5	9	9	0	9	5	-	7	9
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	5	5	7	6	0	2	1	0	3	2	1	3	4	5	7	5	4	5	5	8	4	7
Sugarbeets	0	1	0	0	0	0	0	0	0	0	0	0	9	8	9	9	7	9	7	8	2	7
Velvetl af	2	1	5	1	0	0	0	0	0	0	2	0	5	3	7	4	4	2	7	7	2	1
Wheat	0	3	2	0	0	0	0	0	3	0	0	0	5	3	6	4	4	0	2	3	0	2
Wild oats	0	5	3	7	0	0	0	0	2	0	0	0	7	3	7	3	2	4	8	5	0	1
Table B	COMPOUND																					
Rate 500 g/ha	513	514	515	516	517	519	520	521	522	523	524	525	526	527	528	531	532	533	534	535	536	540
Postemergence																						
B. signalgrass	8	5	3	5	8	0	2	3	7	7	9	8	6	9	0	4	0	4	6	3	0	3
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	-	-	-	0	-	-	10	-	-	-	9	-	8	3	0	-	-	-	-	9
Blackgrass	8	5	1	7	6	0	6	9	8	4	8	8	7	7	5	6	0	7	7	8	0	7
Cocklebur	7	5	5	5	4	0	0	0	3	2	3	2	2	2	3	5	4	4	0	0	0	0

Corn	3	5	0	0	4	0	0	0	5	2	5	2	2	0	0	0	2	0	0	0	0	0
Crabgrass	9	10	9	9	9	6	9	10	9	10	9	9	10	10	10	10	9	9	8	6	3	8
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	9	9	9	9	6	9	9	9	6	9	9	8	9	9	9	8	9	8	5	0	3
Morningglory	9	7	6	7	2	0	10	5	5	4	2	3	7	6	5	-	5	7	3	3	2	6
Nutsedge	5	0	0	-	-	0	0	0	0	0	0	5	2	-	6	3	-	0	2	0	0	0
Rape	7	8	6	9	4	0	9	3	9	2	3	8	4	2	3	2	2	4	7	0	0	-
Redroot pigweed	7	8	5	8	7	0	0	4	9	3	0	8	4	0	0	0	2	9	7	0	8	2
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	8	7	7	7	8	4	4	5	6	5	4	-	3	5	5	6	5	4	7	8	6	1
Sugarbeets	7	5	3	8	3	0	2	4	6	0	0	8	0	2	2	6	0	4	2	0	0	6
Velvetleaf	7	5	8	4	6	4	6	3	7	4	6	3	8	3	5	3	2	8	2	2	0	1
Wheat	6	0	0	7	4	0	0	2	5	2	5	5	0	0	0	0	0	2	5	2	0	0
Wild oats	6	3	0	5	3	0	0	2	7	2	5	6	0	0	0	0	0	0	3	2	0	2

Table B

	COMPOUND																					
Rate 500 g/ha	541	543	544	545	546	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565
Postemergence																						
B. signalgrass	2	3	3	2	0	3	2	4	0	5	3	4	7	2	3	9	7	8	7	7	8	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	5	2	3	7	9	8	0	9	10	7	9	-	0	-	-	4	-	7	-	0	0	0
Blackgrass	0	2	3	0	6	3	2	7	7	7	-	5	6	0	2	7	7	6	3	4	4	0
Cocklebur	5	1	3	-	0	4	2	0	4	2	3	3	0	0	0	2	0	0	2	2	2	2
Corn	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	7	4	3	7	8	6	0
Crabgrass	3	7	9	9	10	9	-	9	9	9	9	10	2	4	8	9	8	9	10	9	9	3
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	2	3	-	5	7	7	9	5	7	7	8	8	9	6	8	9	8	8	8	9	9	3
Morningglory	3	7	10	-	10	4	8	3	7	0	7	6	10	8	10	10	10	9	10	10	10	9
Nutsedge	0	0	0	-	-	0	2	0	0	-	0	0	0	0	0	2	5	4	5	-	0	0
Rape	3	0	3	3	7	7	3	5	7	-	3	5	2	0	2	2	7	4	7	5	2	0
Redroot pigweed	3	0	2	0	3	8	0	7	3	0	-	2	4	0	0	8	9	7	9	5	3	6
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	2	2	2	4	3	3	3	3	-	3	2	8	2	4	6	3	5	5	5	5	3
Sugarbeets	4	3	3	3	5	4	5	8	7	2	-	0	0	0	2	8	6	4	5	0	2	0
Velvetleaf	0	3	0	-	2	4	2	3	3	-	0	4	2	2	2	3	0	0	6	4	3	4

Wheat	0	0	0	0	0	2	0	3	3	3	-	2	3	0	0	3	6	7	5	0	2	0
Wild oats	2	3	2	0	2	2	3	5	3	2	-	2	2	0	0	5	2	2	4	0	2	0

Table B	COMPOUND																					
Rate 500 g/ha	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	584	585	586	587	588
Postemergence																						
B. signalgrass	9	0	7	4	0	5	0	0	0	3	2	3	0	2	8	8	3	9	7	7	0	8
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	0	-	-	-	-	-	-	-	-	9	-	-	-	9	9	-	-	-	-	3	-
Blackgrass	6	0	9	3	0	0	0	0	-	3	7	0	2	5	7	4	7	7	7	8	6	8
Cocklebur	3	2	6	2	0	0	0	3	2	2	0	2	0	0	6	3	4	4	7	0	0	0
Corn	2	0	5	2	0	0	0	0	0	0	4	2	0	0	0	6	0	4	5	3	0	0
Crabgrass	9	8	9	6	0	3	8	9	2	9	9	3	9	8	-	9	3	9	9	9	2	-
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	0	9	4	0	3	0	9	8	-	8	8	8	7	8	9	7	9	9	9	2	8
Morningglory	10	10	10	10	10	10	10	10	10	10	4	10	10	10	10	10	10	3	10	-	7	10
Nutsedge	0	0	0	0	0	0	-	-	0	-	-	0	0	-	-	-	0	3	0	0	0	0
Rape	9	0	3	0	0	0	4	2	3	3	0	0	4	3	8	7	3	9	5	0	0	0
Redroot pigweed	5	0	2	4	0	0	0	7	5	7	4	0	3	3	9	9	7	7	7	2	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	6	6	6	4	3	4	7	6	7	6	4	5	4	4	4	5	3	4	3	3	6	7
Sugarbeets	5	0	2	0	0	0	0	-	0	2	0	-	4	0	6	8	7	8	7	0	0	0
Velvetleaf	5	2	8	3	0	0	7	2	2	3	0	0	3	0	3	6	0	5	5	1	0	7
Wheat	4	0	5	0	0	0	0	0	2	2	0	0	0	0	3	4	0	6	4	0	0	3
Wild oats	4	0	6	0	0	0	0	0	0	0	0	0	0	0	7	5	3	7	2	0	0	0

Table B	COMPOUND																					
Rate 500 g/ha	589	590	591	592	593	594	595	596	598	599	600	601	602	603	604	605	606	607	608	609	610	611
Postemergence																						
B. signalgrass	3	0	0	0	0	3	6	0	0	0	0	7	7	0	0	0	0	7	10	8	9	8
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	-	-	-	-	-	-	-	-	0	8	-	-	-	-	0	-	-	-	9	9
Blackgrass	3	0	0	0	0	5	9	0	0	0	0	8	9	0	0	0	1	7	9	8	10	9
Cocklebur	0	0	0	0	0	4	2	0	0	0	0	1	0	0	0	0	0	0	0	3	2	3
Corn	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2	0	7	5	6
Crabgrass	3	2	0	2	-	9	9	2	0	0	3	9	9	0	3	3	-	9	7	-	9	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Giant foxtail	3	0	0	0	0	9	9	3	0	0	3	9	9	0	4	2	3	9	9	9	9	9
Morningglory	6	4	3	2	2	7	6	2	0	6	0	1	3	3	2	10	-	10	10	10	9	8
Nutsedge	-	0	0	0	0	3	5	0	0	0	0	0	0	0	0	0	0	7	-	6	6	3
Rape	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0	7	3	5	3
Redroot pigweed	2	0	0	0	0	4	7	0	0	0	0	4	6	0	0	0	2	5	8	9	7	8
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	3	3	2	1	1	4	4	3	0	2	4	6	7	2	1	5	-	-	-	7	9	8
Sugarbeets	0	0	0	0	0	5	3	0	0	0	0	0	0	0	0	0	0	0	5	1	0	2
Velv tleaf	5	2	0	0	0	5	7	0	0	0	0	4	0	2	0	0	3	5	6	8	7	5
Wheat	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	2	0	4	0	6	5	8
Wild oats	-	0	0	0	0	0	4	0	0	0	0	0	3	0	0	2	0	4	6	4	9	7

Table B	COMPOUND																					
Rate 500 g/ha	612	613	615	616	617	618	619	620	621	622	623	624	625	627	628	629	630	631	632	633	634	635
Postemergence																						
B. signalgrass	9	8	0	4	0	0	2	0	0	0	0	8	5	8	8	7	3	8	6	5	5	8
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	9	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	10	9	0	5	0	0	0	0	0	0	6	9	7	9	9	8	9	9	8	8	8	-
Cocklebur	2	2	0	0	2	0	0	0	0	2	0	6	0	3	7	2	0	2	0	0	2	3
Corn	0	0	0	0	0	0	0	0	0	0	0	5	3	8	7	6	5	8	5	0	0	2
Crabgrass	10	9	-	7	0	0	2	3	-	5	0	-	8	9	9	9	-	9	-	9	9	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	9	6	6	0	0	3	-	7	7	0	9	9	9	9	9	9	9	9	8	9	9
Morningglory	10	8	1	10	3	0	1	-	8	2	10	2	2	6	2	3	4	10	10	5	2	7
Nutsedge	2	4	-	0	0	-	0	0	0	0	-	3	-	-	-	0	0	-	-	0	0	-
Rape	7	7	0	0	0	0	3	0	0	0	0	3	0	5	6	3	4	2	0	0	0	9
Redroot pigweed	7	8	0	1	0	0	2	0	0	0	2	2	0	8	7	8	5	6	1	2	3	7
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	8	8	3	4	7	-	-	2	7	-	3	7	5	7	8	9	1	-	-	-	-	4
Sugarb ets	1	0	0	2	0	0	0	0	0	2	0	2	0	4	3	0	0	1	0	2	0	7
Velvetleaf	6	8	0	1	2	0	2	0	0	0	0	2	0	8	8	7	6	7	0	0	4	6
Wheat	5	6	0	0	0	0	0	0	0	0	1	4	0	8	7	0	3	7	5	0	0	2
Wild oats	9	9	0	0	0	0	0	0	0	0	1	-	1	7	5	2	3	4	3	0	2	5

Table B COMPOUND

Rate 500 g/ha	636	638	639	640	641	642	643	645	646	647	648	649	650	652	653	654	655	657	658	659	660	661
Postemergence																						
B. signalgrass	3	6	2	4	4	0	2	0	0	8	0	0	2	2	2	0	2	6	0	8	5	7
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	0	-
Blackgrass	5	7	6	5	6	6	4	0	0	8	0	0	3	0	0	0	3	8	7	7	6	-
Cocklebur	3	4	2	5	0	0	0	7	0	4	2	2	0	0	0	0	0	5	5	2	2	0
Corn	2	3	0	0	0	0	0	0	0	6	0	0	4	0	0	0	0	1	0	6	2	0
Crabgrass	9	9	8	6	6	5	6	3	1	9	7	-	9	6	2	7	9	9	-	8	7	8
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	8	7	4	6	7	0	2	0	9	3	7	8	8	7	7	9	8	6	8	8	8
Morningglory	6	7	7	6	9	3	6	3	4	6	10	8	10	7	1	10	-	9	10	10	7	0
Nuts dge	0	7	-	-	-	0	0	-	0	6	0	0	4	0	0	-	-	-	2	0	0	-
Rape	7	0	3	0	0	0	0	0	0	7	2	0	3	0	0	0	3	3	3	1	0	0
Redroot pigweed	8	6	6	4	4	2	3	4	7	8	10	0	6	6	0	0	7	7	7	7	6	4
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	5	3	4	1	-	-	-	-	-	3	3	5	3	0	0	4	-	4	7	6	3
Sugarbeets	5	0	0	1	0	0	0	0	3	7	3	0	0	2	0	0	2	3	2	4	0	0
Velvetleaf	3	4	3	3	3	3	3	0	0	6	0	0	2	0	0	0	0	4	6	6	3	0
Wheat	2	3	4	0	0	0	0	0	0	6	0	0	0	2	0	0	0	5	0	5	0	3
Wild oats	0	3	1	0	1	1	1	0	0	3	0	0	0	0	0	0	1	2	2	3	0	5

Table B

COMPOUND

Rate 500 g/ha	662	663	664	665	666	667	668	670	671	672	674	675	676	677	678	679	680	681	708	709	710	711
Postemergence																						
B. signalgrass	2	0	7	5	7	7	5	8	8	4	8	8	8	0	2	0	0	0	2	0	7	8
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	-	-	-	-	-	8	0	6	-	-	-	-	0	0	0	-	-	-	8	-
Blackgrass	3	2	9	8	8	8	9	5	8	6	9	9	8	1	3	0	1	0	2	0	6	7
Cocklebur	0	2	6	2	7	5	2	3	1	7	4	3	2	1	2	0	0	0	0	3	0	7
Corn	0	0	0	3	0	5	3	6	5	0	7	6	0	0	0	0	0	0	0	0	2	4
Crabgrass	2	4	9	9	9	10	10	8	9	9	9	9	9	4	6	-	3	0	4	8	9	10
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	5	4	9	9	9	9	9	9	9	9	9	9	9	4	6	4	5	0	5	9	9	9
Morningglory	7	4	10	8	7	6	4	4	6	-	-	4	2	7	8	2	1	7	5	6	8	4
Nutsedge	5	0	0	0	0	0	0	5	0	5	-	8	0	0	0	0	0	-	0	6	3	5

Rape	0	0	3	4	4	6	4	4	2	3	5	3	0	0	0	0	0	0	0	0	5	4
Redroot pigweed	0	0	6	7	6	7	7	9	5	8	7	8	5	3	2	0	0	6	5	8	9	10
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	-	-	-	-	-	6	5	4	5	7	5	3	2	2	1	3	1	4	4	5	6
Sugarbeets	0	4	0	4	4	3	6	2	3	3	5	4	2	1	0	0	0	0	0	0	6	3
Velvetleaf	0	2	6	7	6	8	7	4	3	7	8	8	3	3	3	0	0	0	5	6	6	6
Wheat	0	0	2	4	3	5	0	4	6	0	7	7	5	0	0	0	0	0	0	0	6	5
Wild oats	1	0	7	5	3	6	0	3	0	0	3	7	3	0	0	0	0	0	0	0	6	4

Table B

	COMPOUND																					
Rate 500 g/ha	712	713	714	736	739	740	741	743	744	745	746	747	748	749	750	751	752	753	754	756	757	758
Postemergence																						
B. signalgrass	8	7	6	0	7	2	-	7	6	6	8	6	7	3	6	7	6	7	8	2	1	7
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	8	-	-	-	6	0	9	8	-	9	9	-	9	-	10	7	2	6	-	-	-	8
Blackgrass	6	7	7	3	6	7	0	5	5	9	8	8	8	6	8	7	6	4	5	3	4	6
Cocklebur	3	6	3	3	3	3	0	3	0	4	4	4	-	4	3	2	3	4	0	0	2	4
Corn	0	5	0	4	0	0	0	0	5	0	5	5	0	1	5	2	0	1	5	0	0	3
Crabgrass	9	9	9	4	9	9	-	9	9	9	10	9	9	9	-	9	10	9	9	3	6	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	9	8	7	9	9	4	8	8	9	9	9	9	9	8	9	9	9	8	0	7	9
Morningglory	10	10	2	5	8	7	3	10	4	8	10	10	7	5	10	9	9	10	10	10	9	8
Nutsedge	0	3	5	2	3	0	0	9	6	0	4	0	0	0	-	10	0	3	0	0	0	0
Rape	4	6	9	0	2	0	0	3	8	7	7	9	7	6	7	5	4	0	0	3	0	2
Redroot pigweed	8	9	9	0	5	8	7	8	8	6	9	8	8	7	7	9	9	7	-	3	7	8
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	5	5	3	3	5	6	3	4	5	5	6	8	5	5	7	7	6	4	2	2	4	5
Sugarbeets	6	5	7	0	4	2	4	4	5	4	4	3	7	4	6	3	3	5	3	0	3	8
Velvetleaf	6	7	3	3	3	2	1	4	2	7	7	7	4	3	6	3	2	2	0	0	4	7
Wheat	5	2	6	2	6	4	3	6	7	3	6	4	-	0	2	3	5	5	5	0	0	6
Wild oats	3	5	9	3	0	0	-	3	2	4	7	2	0	2	0	5	0	2	0	0	0	2

Table B

	COMPOUND																		
Rate 500 g/ha	759	760	761	762	763	764	765	766	767	772	773	774	775	777	778	780	790	791	792
Postemergence																			
B. signalgrass	7	5	3	3	5	3	8	-	7	0	0	0	3	3	6	5	7	0	2

Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	3	0	4	5	-	3	9	0	0	0	7	3	4	-	5	3	-
Blackgrass	8	3	0	0	5	8	7	-	9	0	0	0	7	4	4	4	5	6	7
Cocklebur	2	1	0	0	3	5	3	6	2	0	0	0	0	0	0	0	0	5	3
Corn	0	1	0	2	2	4	3	4	2	0	0	0	0	0	0	6	4	1	3
Crabgrass	8	-	0	8	9	9	9	9	9	0	0	0	9	9	9	7	9	9	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	7	3	-	9	8	9	9	9	0	0	0	9	9	9	9	8	9	9
Morningglory	4	3	-	2	7	5	8	2	7	2	0	0	6	8	6	8	10	9	10
Nutsedge	0	0	0	3	6	3	3	5	7	0	0	0	-	3	-	4	7	0	0
Rape	0	5	0	0	3	7	1	0	-	0	0	0	0	0	3	0	3	6	7
Redroot pigweed	4	3	6	6	8	7	8	8	9	0	0	0	3	4	4	0	5	8	-
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	3	5	3	4	5	4	5	4	7	0	0	0	6	6	4	4	4	5	7
Sugarbeets	0	0	6	6	4	7	4	2	7	0	0	0	0	5	2	0	7	5	2
Velvetleaf	6	3	0	3	2	4	7	5	3	0	0	0	2	5	3	4	7	6	7
Wheat	0	0	0	0	3	-	5	3	2	0	0	0	0	3	2	2	5	0	3
Wild oats	3	4	0	2	1	3	2	2	3	0	0	0	0	3	2	2	3	0	6

Table B	COMPOUND																												
Rate 500 g/ha	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	24	25	34	35	36	37	38	39
Preemergence																													
B. signalgrass	6	0	0	9	3	0	0	5	0	8	0	0	4	2	0	0	7	8	2	0	0	6	7	3	7	8	0	8	0
Bedstraw	0	0	0	4	0	0	0	0	0	0	0	0	0	4	7	0	2	3	0	6	-	0	3	0	0	0	0	0	0
Blackgrass	2	0	0	8	5	2	0	0	0	9	0	2	6	2	0	0	9	5	3	5	0	4	8	6	3	7	0	10	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	-	-	0	0
Corn	5	7	0	0	0	2	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	8	0	0	10	6	9	8	6	3	7	8	0	5	9	10	2	10	10	10	7	7	10	10	10	10	10	5	10	6
Giant foxtail	9	7	8	10	9	9	8	10	3	9	3	2	8	9	10	8	10	9	5	9	9	9	10	10	10	10	3	10	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0
Nutsedge	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	1	0	3	0	3	0	0	0
Redroot pigweed	2	0	0	-	7	7	0	5	0	0	0	0	0	6	8	0	10	9	-	9	8	9	8	6	0	7	0	10	6
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0
Sugarbeets	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6	0	6	4	2	7	8	9	2	4	0	5	0	6	0
Velvetleaf	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0

Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Wild oats	0	0	0	7	6	3	0	2	0	0	0	0	2	0	0	0	3	5	0	0	0	2	7	7	6	7	0	8	0
Table B	COMPOUND																												
Rate 500 g/ha	40	41	42	43	44	45	46	47	48	49	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
Preemergence																													
B. signalgrass	7	7	0	0	0	9	3	0	0	0	0	6	3	2	0	0	0	0	0	0	5	0	0	0	0	0	2	8	0
Bedstraw	0	0	0	2	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	5	2	4	3	-	3	0	0	4	0
Blackgrass	6	4	0	1	1	0	7	0	2	0	0	4	4	2	0	0	0	0	0	0	6	4	0	0	0	0	2	4	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	-	0	5	0	0	0	0	0	0	0
Corn	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	10	10	0	0	2	9	10	5	7	9	2	10	10	8	0	0	0	0	5	1	8	9	2	3	9	8	7	10	4
Giant foxtail	10	10	0	0	1	10	10	3	10	10	8	10	10	7	0	0	0	0	3	5	10	10	3	4	9	9	8	10	4
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	-	3	6	0	10	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	3	0	0	6	0
Redroot pigweed	6	7	0	4	0	8	9	0	0	0	0	6	3	0	0	0	0	0	0	0	3	0	0	0	3	0	10	10	0
Soybean	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	6	0	0	0	0	8	6	0	0	0	0	0	3	0	0	0	0	0	0	5	6	0	0	0	0	0	3	0	0
Velvetleaf	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	5	4	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	2	2	2	0

Table B	COMPOUND																												
Rate 500 g/ha	70	71	72	73	74	75	76	77	78	79	80	81	82	83	85	86	87	88	89	90	91	92	93	94	95	96	97	99	101
Preemergence																													
B. signalgrass	0	0	0	0	0	8	8	0	9	5	4	8	0	0	0	7	5	5	0	3	10	-	8	5	7	2	4	3	0
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	8	1	3	0	0	2	-	0	0
Blackgrass	0	0	0	0	0	9	8	0	6	6	6	6	0	0	0	8	7	6	0	6	10	10	10	9	6	8	3	4	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	-	-	-	0	0	0	0	-
Corn	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	2	0	0	0	9	9	9	6	0	0	0	0	0
Crabgrass	0	0	4	9	8	10	8	3	10	10	10	8	0	0	0	10	10	10	2	8	10	10	10	10	8	9	4	10	0
Giant foxtail	0	0	2	10	10	10	9	5	9	9	9	8	0	0	0	10	10	10	2	10	10	10	10	10	8	8	8	10	0
Morningglory	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3	6	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-	0	0	0	0	6	0
Rape	0	0	0	0	5	10	0	0	5	0	5	0	0	0	0	4	5	0	0	0	10	10	10	5	3	3	6	3	0
Redroot pigweed	0	0	0	0	3	10	8	0	6	10	7	0	0	0	0	8	10	10	0	6	10	10	10	4	9	8	10	10	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	7	9	9	0	0	0	2	0	0

Sugarbeets	0	0	0	0	4	4	0	0	5	2	5	0	0	0	0	3	9	8	0	0	10	9	9	2	3	2	9	4	0
Velvetleaf	0	0	0	0	0	0	0	3	7	3	3	3	0	0	0	5	0	2	0	0	8	8	10	3	0	0	0	3	0
Wheat	0	0	0	0	0	3	2	0	3	2	0	2	0	0	0	0	0	0	0	0	6	7	8	0	0	0	2	2	0
Wild oats	0	0	0	0	0	8	4	0	6	4	5	8	0	0	0	5	3	5	0	3	10	10	10	6	5	7	5	5	0

Table B	COMPOUND																					
Rate 500 g/ha	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123
Preemergence																						
B. signalgrass	0	7	6	10	2	10	9	10	7	4	5	10	10	10	10	10	10	9	8	9	5	2
Bedstraw	0	0	0	5	4	10	8	10	7	3	0	8	0	0	9	0	0	8	0	5	0	0
Blackgrass	4	5	7	10	2	10	10	10	7	5	5	10	10	6	10	10	7	9	8	9	3	7
Cocklebur	0	0	0	0	0	0	0	5	0	0	0	3	-	0	5	0	0	-	0	0	-	0
Corn	0	0	2	3	0	9	9	9	4	4	2	10	9	0	9	9	0	2	0	0	0	0
Crabgrass	4	-	9	9	8	10	10	10	10	9	10	10	9	9	10	10	10	10	9	9	8	7
Giant foxtail	10	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	10
Morningglory	0	0	0	0	0	7	0	10	0	0	2	8	1	0	8	6	0	5	0	0	0	0
Nutsedge	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	7	0	6	0	0	0	0
Rape	0	0	0	6	2	10	9	10	8	4	5	10	10	5	10	10	0	9	3	0	3	0
Redroot pigweed	0	7	4	10	4	10	10	10	8	8	9	10	10	8	10	10	10	10	8	8	8	9
Soybean	0	0	0	0	0	8	2	9	6	5	4	9	3	0	9	9	0	0	0	0	0	0
Sugarbeets	0	4	6	9	2	10	8	10	5	4	0	10	7	5	10	10	0	8	7	7	4	7
Velvetleaf	0	3	0	6	0	10	5	10	7	7	5	8	6	2	10	10	4	6	3	0	3	6
Wheat	0	2	4	2	0	8	3	10	3	3	0	8	8	0	8	8	0	5	6	3	0	7
Wild oats	0	6	7	9	0	10	9	10	5	4	6	10	10	4	10	10	6	9	8	6	5	6

Table B	COMPOUND																					
Rate 500 g/ha	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145
Preemergence																						
B. signalgrass	0	0	0	0	0	7	9	9	9	7	8	4	5	9	9	9	2	0	0	5	7	5
Bedstraw	0	0	0	0	0	0	10	10	10	0	3	4	0	10	10	9	0	0	0	0	4	4
Blackgrass	0	0	0	0	2	4	10	10	10	5	2	4	6	10	9	10	4	0	0	6	7	7
Cocklebur	0	0	0	0	0	-	0	2	0	2	0	0	-	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	4	6	10	8	0	0	0	0	4	9	7	0	0	0	0	4	0
Crabgrass	0	0	0	0	0	9	10	10	9	5	9	4	8	10	10	10	10	7	4	10	9	8
Giant foxtail	0	0	0	4	8	9	10	10	10	10	10	-	10	10	10	10	10	6	6	10	8	8
Morningglory	0	0	0	0	0	0	4	7	2	0	1	0	0	1	4	0	0	0	0	0	0	1
Nutsedge	0	0	0	0	0	0	3	0	9	0	0	0	-	-	7	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	10	10	8	2	6	0	0	10	10	9	0	0	0	6	2	0

Redroot pigweed	0	0	0	7	0	7	10	10	7	3	2	4	10	10	10	10	0	0	0	10	5	4
Soybean	0	0	0	0	0	2	4	8	4	0	0	0	0	5	8	2	1	0	0	1	0	0
Sugarbeets	0	0	0	0	0	5	10	10	8	5	7	0	9	10	10	6	1	0	0	9	6	3
Velvetleaf	0	0	0	0	0	6	10	10	10	2	7	0	4	10	10	7	0	0	0	0	0	5
Wheat	0	0	0	0	0	3	4	10	4	0	0	0	0	5	9	4	0	0	0	0	0	0
Wild oats	0	0	0	0	0	6	10	10	9	4	2	0	3	10	10	9	1	0	0	5	2	3

Table B									COMPOUND													
Rate 500 g/ha	146	147	148	149	150	151	152	153	154	157	158	159	160	161	162	163	164	165	166	167	168	169
Preemergence																						
B. signalgrass	10	10	7	0	0	7	6	0	4	0	0	0	0	5	7	2	0	6	4	8	5	7
Bedstraw	7	8	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	5	0	10
Blackgrass	10	10	9	0	0	10	3	0	5	5	3	0	0	9	3	10	0	8	5	3	2	10
Cocklebur	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	9	9	0	0	0	9	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	6
Crabgrass	10	10	9	0	6	10	3	0	0	6	7	0	0	9	10	9	4	8	7	10	7	10
Giant foxtail	10	10	10	0	5	10	5	0	8	10	8	0	0	10	9	10	2	9	7	10	10	10
Morningglory	4	7	1	0	0	0	0	0	0	3	2	0	0	0	0	0	0	3	0	0	0	0
Nutsedge	3	4	0	0	-	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Rape	10	10	9	0	0	10	0	0	0	0	0	0	0	3	9	8	0	10	0	5	0	10
Redroot pigweed	10	10	10	0	9	10	0	0	9	0	2	0	0	10	7	9	0	1	0	8	0	8
Soybean	4	9	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	5
Sugarbe ts	10	7	10	0	0	10	0	0	6	0	0	0	0	0	0	6	0	4	0	5	7	8
Velvetl af	8	7	8	0	3	10	0	0	0	0	0	0	0	0	0	5	0	4	6	3	6	8
Wheat	8	8	6	0	0	5	0	0	0	0	0	0	0	2	0	4	0	2	0	0	0	4
Wild oats	10	10	8	0	2	10	0	0	5	0	2	0	0	6	5	10	0	6	2	6	3	10

Table B									COMPOUND													
Rate 500 g/ha	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	187	188	189	190	191	192
Preemergence																						
B. signalgrass	10	5	8	4	4	0	0	0	9	9	0	0	0	4	8	0	0	7	6	0	3	6
Bedstraw	9	0	5	0	3	9	0	10	0	0	0	-	0	7	2	0	0	0	0	4	0	0
Blackgrass	10	2	3	6	2	0	3	6	3	2	0	0	0	0	7	0	0	0	7	3	6	7
Cocklebur	9	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-	0	0	0	0	0	0
Corn	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Crabgrass	10	10	10	9	10	8	10	9	9	9	0	0	0	3	9	9	0	0	3	0	8	9
Giant foxtail	10	10	10	10	10	8	10	10	9	10	0	0	0	3	10	9	0	7	6	0	10	10
Morningglory	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

Nutsedge	9	0	0	0	-	3	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	-
Rape	10	4	5	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	9
Redroot pigweed	10	6	8	5	9	0	0	0	10	10	0	0	0	0	1	0	0	0	0	0	6	9
Soybean	9	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Sugarbeets	10	0	5	6	6	0	2	0	0	0	0	0	0	0	0	0	0	6	0	0	0	8
Velv tleaf	10	0	3	0	0	0	2	0	0	5	0	0	0	0	7	0	0	2	0	0	0	6
Wheat	8	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	2	0
Wild oats	10	5	6	3	0	0	5	2	3	3	0	0	0	0	3	0	0	0	3	0	7	7

Table B	COMPOUND																					
Rate 500 g/ha	193	194	195	196	197	198	199	201	202	203	204	205	206	207	208	210	211	212	214	215	216	218
Preemergence																						
B. signalgrass	0	3	6	0	0	0	9	4	0	0	2	0	0	0	0	0	5	5	0	2	4	7
Bedstraw	0	10	2	0	0	0	0	0	2	0	0	0	0	0	0	0	10	10	0	0	0	3
Blackgrass	0	8	6	0	0	0	10	4	2	0	5	0	0	7	3	4	9	9	3	6	4	10
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	6
Crabgrass	7	-	9	0	3	0	10	9	9	0	8	8	8	4	6	8	3	5	4	4	8	7
Giant foxtail	6	9	10	0	3	3	10	10	10	0	10	3	9	10	10	5	8	10	6	5	9	10
Morningglory	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	-	0	0	0	10	-	-	0	0	-	0	0	0	0	-	0	-	0	0	0
Rape	0	7	0	0	0	0	0	0	0	0	3	0	0	2	0	3	4	8	0	2	0	2
Redroot pigweed	0	10	0	0	0	0	10	0	3	0	0	0	3	8	2	8	7	10	9	6	8	10
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	6
Sugarbeets	0	3	2	0	0	0	6	0	1	0	0	0	0	0	0	3	8	8	0	7	0	7
Velvetl af	0	3	0	0	0	0	0	0	1	0	0	0	0	5	3	0	0	5	0	0	0	2
Wheat	0	2	0	0	0	0	0	2	2	0	2	0	0	0	0	0	5	7	0	0	0	3
Wild oats	0	8	4	0	0	0	7	5	5	0	6	0	0	0	3	2	5	7	0	2	0	9

Table B	COMPOUND																					
Rate 500 g/ha	219	220	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241
Preemergence																						
B. signalgrass	9	8	0	4	4	7	10	2	0	0	0	0	5	4	0	0	3	0	0	5	3	4
Bedstraw	9	10	0	3	0	2	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	10
Blackgrass	10	10	0	5	5	10	10	10	0	0	2	0	8	9	0	0	5	0	0	4	2	10
Cocklebur	0	5	-	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0
Corn	7	7	0	0	0	6	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Crabgrass	10	10	9	9	10	10	10	10	2	0	9	7	10	10	0	0	5	3	10	10	9	10

Giant foxtail	10	10	9	9	10	10	10	10	9	0	9	8	9	10	0	0	10	4	10	10	10	10
Morningglory	1	6	0	1	0	8	8	0	0	0	2	6	0	2	0	0	0	2	3	0	0	5
Nutsedge	-	-	-	-	-	10	-	-	0	0	0	0	-	-	0	-	-	-	-	0	-	10
Rape	10	8	0	0	0	6	10	10	0	0	0	0	0	3	0	0	0	0	10	0	0	9
Redroot pigweed	10	10	4	7	4	10	9	10	0	0	0	0	7	8	0	0	0	0	9	0	0	10
Soybean	0	3	0	0	0	6	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Sugarbeets	8	8	0	0	0	6	6	8	0	0	0	0	4	8	0	0	0	0	6	0	0	6
Velvetleaf	10	8	3	0	0	7	7	2	0	0	0	0	0	7	0	0	0	0	3	5	2	7
Wheat	9	8	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	2	2	0	5
Wild oats	9	8	1	4	2	10	10	3	0	0	0	0	8	6	0	0	2	0	3	3	0	8
Table B									COMPOUND													
Rate 500 g/ha	242	243	245	246	247	248	249	251	253	254	255	257	258	259	260	261	262	263	265	266	267	268
Preemergence																						
B. signalgrass	10	10	10	5	0	0	0	9	0	0	9	3	8	9	3	3	0	0	4	7	9	0
Bedstraw	10	9	10	2	0	0	0	10	0	0	0	0	10	10	5	-	0	0	0	9	2	0
Blackgrass	10	10	10	10	0	0	0	10	0	4	10	0	8	10	3	4	4	0	-	9	8	0
Cocklebur	3	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0
Corn	9	9	8	3	0	0	0	5	0	0	8	0	5	3	0	0	0	0	0	0	3	0
Crabgrass	10	10	10	10	2	0	2	10	0	3	9	5	10	7	9	5	3	2	6	6	8	0
Giant foxtail	10	10	10	10	3	0	5	10	0	10	10	9	10	10	10	9	7	9	10	8	9	0
Morningglory	10	10	6	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	1	0	0
Nutsedge	10	-	-	0	-	0	0	-	0	0	-	0	-	0	-	0	0	0	0	0	0	-
Rape	10	10	10	10	0	0	0	10	0	6	5	0	7	9	0	0	0	0	0	5	0	0
Redroot pigweed	10	10	10	3	0	0	0	10	0	0	10	4	10	8	4	0	0	0	0	9	7	0
Soybean	7	9	8	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Sugarbeets	8	10	10	8	0	0	0	10	0	6	7	0	7	0	0	0	0	0	0	7	5	0
Velvetleaf	10	10	10	5	0	0	0	7	0	0	7	0	7	5	0	0	0	3	0	4	3	0
Wheat	10	9	9	5	0	0	0	8	0	0	8	4	7	0	0	0	0	0	1	6	0	0
Wild oats	10	9	10	8	0	0	0	9	0	2	10	4	6	4	0	0	0	0	5	7	2	0
Table B									COMPOUND													
Rate 500 g/ha	269	270	271	272	273	274	276	277	278	279	280	281	282	283	284	286	292	293	294	297	298	299
Preemergence																						
B. signalgrass	7	0	10	0	3	0	10	10	0	0	0	0	7	10	8	8	0	9	9	0	0	10
Bedstraw	0	0	10	3	-	0	0	2	0	0	0	10	2	9	8	0	0	0	0	0	-	10
Blackgrass	7	0	10	0	0	0	10	10	0	0	0	4	8	10	10	7	0	9	10	0	0	10
Cocklebur	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0

Corn	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	-	2	0	0	8
Crabgrass	6	0	8	2	9	5	7	10	4	1	0	10	8	7	9	10	0	8	10	7	0	9
Giant foxtail	-	0	10	6	9	9	10	10	8	7	0	10	10	10	10	10	0	10	10	7	-	10
Morningglory	0	0	7	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4	0	0	0	7
Nutsedge	-	0	0	0	0	0	-	0	-	-	0	0	-	0	0	-	0	-	0	0	0	-
Rape	0	0	10	0	0	0	10	2	0	0	0	0	2	8	7	7	0	10	3	0	0	10
Redroot pigweed	4	0	10	3	0	0	4	5	0	0	0	0	9	10	8	10	0	10	2	0	0	10
Soybean	4	0	1	0	0	0	0	4	0	0	0	0	0	0	3	0	0	2	0	0	0	7
Sugarbeets	4	0	8	0	7	0	7	7	0	0	0	0	3	5	6	4	0	8	2	0	0	10
Velvetleaf	0	0	8	0	1	0	3	7	0	0	0	0	0	7	7	5	0	8	4	0	0	8
Wheat	0	0	3	0	0	0	3	4	0	0	0	0	0	6	0	2	0	9	0	0	0	8
Wild oats	4	0	8	2	3	0	6	8	0	0	0	3	7	7	5	6	0	9	8	0	0	8

Table B

	COMPOUND																					
Rate 500 g/ha	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	319	320	321	322
Preemergence																						
B. signalgrass	2	0	3	0	0	5	0	4	0	2	8	0	0	0	6	6	9	8	3	3	5	3
Bedstraw	8	0	0	-	0	0	0	0	0	0	10	0	0	0	3	-	6	-	7	0	3	2
Blackgrass	0	0	5	0	0	4	0	4	0	6	10	0	0	0	10	10	10	10	4	6	7	7
Cocklebur	-	-	0	0	0	0	0	-	0	0	4	0	0	0	0	0	2	0	0	0	0	4
Corn	0	0	0	0	0	0	0	2	0	4	5	0	0	0	0	3	5	5	0	0	0	0
Crabgrass	7	0	7	-	8	7	0	2	0	6	7	0	0	0	8	7	10	8	3	7	4	7
Giant foxtail	10	0	9	0	6	10	9	9	0	9	10	0	0	0	10	10	10	10	9	7	10	10
Morningglory	0	0	0	3	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	-	0	0	0	0	10	0	0	0	0	0	-	0	0	0	0	0
Rape	0	0	-	0	0	0	0	0	0	0	10	0	0	0	7	0	4	10	0	0	0	2
Redroot pigweed	0	0	0	0	0	7	0	4	0	2	10	0	0	0	9	3	10	10	0	0	0	8
Soybean	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	4	0	0	0	0
Sugarbeets	0	0	2	0	6	3	0	2	0	0	10	0	0	0	6	2	4	8	0	0	0	4
Velvetleaf	0	0	0	0	0	0	0	2	0	2	8	0	0	0	5	0	6	8	0	0	0	0
Wheat	2	0	0	0	0	0	0	0	0	0	7	0	0	0	3	7	2	8	0	0	0	0
Wild oats	3	0	5	0	0	1	0	8	0	2	9	0	0	0	3	3	6	10	0	0	5	3

Table B

	COMPOUND																					
Rate 500 g/ha	323	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345
Preemergence																						
B. signalgrass	0	0	7	7	5	0	0	0	0	0	0	0	0	0	0	0	2	0	6	8	0	0
Bedstraw	-	0	-	-	-	-	0	0	-	0	0	-	0	0	0	0	5	2	-	-	-	0

Blackgrass	0	7	8	7	7	0	-	0	0	0	0	0	0	3	0	3	8	7	7	10	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
Crabgrass	2	2	5	5	5	3	0	0	5	3	0	2	0	3	0	5	9	8	9	10	1	0
Giant foxtail	2	10	9	9	9	3	0	0	7	2	0	10	0	9	9	10	10	10	10	10	8	0
Morningglory	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Nutsedge	0	-	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	1	2	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	6	-	0
Redroot pigweed	0	0	7	3	4	0	0	0	3	0	0	0	0	0	0	0	4	8	0	10	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Sugarbeets	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	7	0	0
Wheat	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	0	0
Wild oats	0	2	3	4	1	0	0	0	0	0	0	0	0	0	0	0	3	2	4	9	0	0
Table B									COMPOUND													
Rate 500 g/ha	348	349	350	351	352	353	354	355	356	357	358	359	360	361	363	364	365	367	368	369	370	371
Preemergence																						
B. signalgrass	7	4	4	4	7	5	5	6	5	7	7	0	7	6	6	3	0	5	8	2	5	4
Bedstraw	9	-	10	10	-	3	0	9	9	10	10	0	-	2	10	3	0	10	10	-	-	-
Blackgrass	9	4	8	8	10	8	9	10	9	10	10	0	10	10	10	4	0	10	10	5	10	10
Cocklebur	0	0	0	0	0	-	-	-	0	0	0	0	0	0	0	0	0	-	0	0	10	0
Corn	9	2	7	6	9	7	6	4	6	9	6	0	9	6	7	0	0	5	10	0	9	7
Crabgrass	10	9	10	10	10	10	10	10	10	10	10	0	10	9	9	5	4	10	10	10	10	10
Giant foxtail	10	10	10	10	10	10	10	10	10	10	10	0	10	10	10	10	3	10	10	10	10	10
Morningglory	0	0	2	0	2	1	0	2	0	7	5	0	10	0	6	0	0	2	5	0	3	3
Nutsedge	0	0	10	9	0	0	0	0	0	6	0	0	7	0	2	-	0	0	10	5	10	9
Rape	7	4	10	9	7	5	5	5	5	8	4	0	0	6	5	2	0	10	10	5	10	10
Redroot pigweed	10	7	10	10	10	10	10	10	10	10	10	0	10	10	10	0	0	10	10	10	10	10
Soybean	0	0	2	2	2	0	1	0	0	0	1	0	5	1	0	0	0	0	8	4	7	2
Sugarbeets	6	4	9	8	7	4	6	3	5	6	3	0	7	6	8	0	0	9	10	4	-	10
Velvetleaf	7	3	6	5	7	6	7	5	5	7	8	0	7	5	7	0	0	6	10	6	6	6
Wheat	0	0	3	2	6	2	2	2	6	9	3	0	8	6	7	0	0	0	10	0	7	4
Wild oats	10	9	7	4	10	6	8	9	-	10	10	0	10	10	10	3	0	7	10	7	10	6
Table B									COMPOUND													
Rate 500 g/ha	372	373	374	375	376	378	379	380	381	382	383	384	385	387	388	389	390	391	393	394	395	396
Preemergence																						

B. signalgrass	8	2	5	8	0	0	0	0	0	6	6	7	9	2	6	4	10	0	2	10	0	5
Bedstraw	10	0	-	10	-	0	-	-	0	-	-	-	-	-	7	10	-	-	-	-	0	-
Blackgrass	10	7	6	10	0	0	0	2	2	7	7	7	10	2	6	9	10	0	3	10	0	5
Cocklebur	2	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	-	0	0	0	0	0
Corn	9	3	0	7	0	0	0	0	2	2	0	5	0	0	9	4	7	0	0	5	0	0
Crabgrass	10	10	9	10	0	10	8	9	9	10	10	9	10	9	10	10	10	0	8	10	2	10
Giant foxtail	10	10	10	10	0	10	9	10	9	10	10	10	10	9	10	10	10	0	10	10	2	10
Morningglory	3	1	0	0	0	0	0	0	0	0	0	2	2	0	0	1	7	0	2	2	0	0
Nutsedge	10	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	2	0	0	6	0	0
Rape	10	-	7	8	0	0	0	0	0	0	0	0	4	0	8	8	8	0	0	9	0	0
Redroot pigweed	10	10	-	10	0	0	0	6	0	0	3	0	10	9	10	10	10	0	10	10	0	8
Soybean	2	2	0	0	0	0	0	0	0	0	0	3	0	0	4	3	3	0	0	2	0	0
Sugarbeets	10	7	4	7	0	0	0	0	0	0	0	2	7	2	6	4	8	0	3	7	0	2
Velvetl af	7	0	0	7	0	0	0	0	0	0	0	3	3	3	6	2	7	0	0	7	0	0
Wheat	6	0	0	3	0	0	0	0	0	0	0	3	8	0	8	0	9	0	0	9	0	0
Wild oats	10	0	0	9	0	0	0	4	0	4	0	6	10	7	10	4	10	0	3	10	0	4

Table B COMPOUND

Rate 500 g/ha	397	398	400	401	402	403	404	405	406	407	408	409	410	411	414	415	416	417	418	419	420	421
Preemergence																						
B. signalgrass	10	10	4	0	9	7	10	0	0	0	7	9	10	10	5	6	9	7	6	8	8	9
Bedstraw	-	-	-	-	10	-	10	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-
Blackgrass	10	10	0	2	10	9	10	0	0	0	10	10	10	10	10	9	10	9	0	3	10	10
Cocklebur	0	0	0	0	0	-	0	0	0	0	0	2	0	0	0	0	4	0	0	0	0	0
Corn	8	8	2	0	9	6	6	-	0	0	8	10	9	9	0	4	6	0	-	0	2	8
Crabgrass	10	10	10	10	10	10	10	10	6	9	10	10	10	10	10	10	10	10	10	9	10	10
Giant foxtail	10	10	10	8	10	10	10	10	9	10	10	10	10	10	10	10	10	10	10	5	10	10
Morningglory	4	0	0	0	2	0	5	0	0	0	7	5	0	4	0	0	8	0	0	2	8	8
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	8	-	2	-	0	4	0	0	0	10	0
Rape	10	10	0	0	8	7	8	0	0	0	8	6	8	10	0	10	10	6	9	2	8	10
Redroot pigweed	10	10	6	0	10	9	10	0	0	0	10	10	8	10	0	10	10	10	8	10	5	10
Soybean	0	0	0	3	1	2	3	3	0	0	0	8	3	1	0	0	9	0	0	0	0	10
Sugarbeets	9	9	4	0	8	5	8	0	0	0	8	9	0	8	0	8	9	6	2	5	3	10
Velvetleaf	6	7	2	0	8	5	7	0	0	0	7	8	8	8	0	7	8	6	6	4	7	10
Wheat	3	2	0	0	6	0	5	0	0	0	7	10	8	10	0	3	10	2	2	0	7	9
Wild oats	10	8	0	0	10	8	10	0	0	0	8	8	10	10	7	6	10	4	0	2	5	10

Table B COMPOUND

Rate 500 g/ha	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	443	444
Preemergence																						
B. signalgrass	0	0	0	9	8	4	3	4	3	0	0	6	0	1	10	0	2	0	8	0	10	8
Bedstraw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	0	0	0	10	9	6	2	3	9	3	2	9	0	2	9	0	3	0	10	0	0	8
Cocklebur	0	0	0	2	0	0	0	0	0	-	0	3	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	9	6	0	0	0	2	0	0	0	0	0	9	0	0	0	0	0	0	0
Crabgrass	0	2	0	10	10	10	10	10	10	3	9	10	1	9	10	2	10	0	10	0	9	10
Giant foxtail	0	4	0	10	10	10	10	10	10	3	9	10	2	9	10	3	10	0	10	0	10	10
Morningglory	0	0	0	4	6	0	0	0	0	0	0	3	0	0	1	0	2	0	0	0	0	0
Nutsedge	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	0	-	0	-	0	0	0
Rape	0	0	0	10	10	0	0	0	4	3	0	7	0	0	10	0	2	0	3	0	0	2
Redroot pigweed	0	0	0	3	10	0	0	0	7	0	0	10	4	8	10	0	10	0	10	0	6	10
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3
Sugarbeets	0	0	0	2	6	0	0	0	0	0	0	8	0	1	5	0	0	0	7	0	0	0
Velvetleaf	0	0	0	6	5	0	0	0	7	0	0	6	0	2	7	0	6	0	7	0	0	4
Wheat	0	0	0	4	6	0	0	0	5	0	0	2	0	0	5	0	0	0	7	0	0	0
Wild oats	3	0	0	10	10	3	2	0	3	2	0	8	0	3	10	0	3	0	9	0	0	4

Table B COMPOUND

Rate 500 g/ha	445	446	447	448	449	451	452	453	454	455	456	457	458	459	460	461	462	463	465	466	467	468
Preemergence																						
B. signalgrass	3	8	0	2	0	0	0	6	4	9	2	0	4	1	0	0	0	2	5	9	2	4
Bedstraw	-	-	-	0	4	-	-	-	-	-	-	0	-	-	-	-	0	-	-	2	0	-
Blackgrass	1	10	0	2	3	0	2	5	6	7	6	0	9	6	3	0	0	4	10	8	2	9
Cocklebur	-	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Corn	0	6	0	0	0	0	0	3	3	7	0	0	3	0	2	0	0	0	2	4	0	2
Crabgrass	9	9	9	9	9	7	5	7	9	10	9	0	10	10	9	3	0	2	10	10	8	9
Giant foxtail	9	10	8	9	10	7	7	10	10	10	10	8	10	10	9	3	0	10	10	10	9	10
Morningglory	0	9	0	0	0	0	0	3	0	4	3	0	0	0	0	0	0	0	0	0	0	2
Nutsedge	0	0	0	0	0	0	0	-	0	3	0	0	0	0	0	0	0	0	0	-	0	0
Rape	2	10	0	0	0	0	0	3	0	9	0	0	4	0	0	0	0	0	5	3	7	6
Redroot pigweed	10	10	0	0	3	0	0	10	10	10	5	0	8	7	0	0	0	10	10	10	9	10
Soybean	0	2	0	0	2	0	0	0	0	2	0	0	2	0	0	0	0	0	-	4	0	0
Sugarbeets	0	8	0	0	0	0	0	5	0	6	3	0	8	0	0	0	0	0	5	4	2	6
Velvetleaf	3	10	0	0	0	0	0	6	6	6	2	0	6	0	0	0	0	2	8	4	1	4
Wheat	0	7	0	0	0	0	0	6	0	2	0	0	2	0	0	0	0	0	0	1	0	6

Wild oats	0	10	7	0	0	0	0	8	2	10	3	0	10	0	0	0	0	0	3	7	0	7

Table B									COMPOUND													
Rate 500 g/ha	469	470	471	472	473	474	476	477	478	479	480	482	485	486	487	488	489	490	492	493	494	495
Preemergence																						
B. signalgrass	10	6	10	10	0	7	0	6	10	9	9	0	8	8	5	10	9	8	0	0	0	0
Bedstraw	-	-	-	-	-	0	-	3	-	0	-	-	-	-	-	-	-	-	0	0	0	-
Blackgrass	10	-	10	10	3	9	0	8	10	9	9	4	9	10	9	10	10	9	0	0	0	0
Cocklebur	0	0	0	2	0	0	0	0	0	-	0	0	0	0	0	0	0	-	0	0	0	0
Corn	9	0	3	7	0	4	0	0	0	3	3	0	7	8	0	6	5	5	0	0	0	0
Crabgrass	10	9	10	10	7	10	0	10	10	10	10	8	10	10	10	10	10	10	3	2	0	0
Giant foxtail	10	3	10	10	7	10	0	10	10	10	10	9	10	10	10	10	10	10	9	10	0	0
Morningglory	1	0	0	5	0	0	0	0	2	4	0	0	4	0	0	0	1	0	0	0	0	0
Nutsedge	-	0	0	10	-	0	0	0	3	-	0	0	0	0	0	0	0	0	0	0	0	0
Rape	10	0	10	4	0	4	0	2	6	4	0	0	2	6	0	10	9	8	0	0	0	0
Redroot pigweed	10	0	10	10	10	7	4	8	10	6	9	0	9	9	10	10	10	8	0	0	0	0
Soybean	2	0	0	3	0	0	0	4	0	0	1	0	0	2	0	1	3	4	0	0	1	0
Sugarbeets	10	0	4	6	0	3	0	0	7	4	0	0	2	6	0	7	5	5	0	0	0	0
Velvetleaf	7	0	6	7	0	0	0	0	7	5	0	2	3	0	0	6	7	4	4	0	0	0
Wheat	6	0	0	0	0	0	0	0	8	7	2	0	5	0	0	5	6	4	0	0	0	0
Wild oats	10	3	7	10	0	8	0	7	10	7	7	3	8	8	6	10	9	8	0	0	0	0

Table B									COMPOUND													
Rate 500 g/ha	496	497	498	499	500	501	502	503	504	505	506	508	509	510	511	512	513	514	515	516	517	519
Preemergence																						
B. signalgrass	8	0	0	2	10	10	10	9	10	6	0	8	9	9	0	10	9	10	9	10	0	0
Bedstraw	-	0	-	-	10	9	10	10	8	9	4	0	9	4	0	3	4	0	3	7	0	0
Blackgrass	2	0	0	1	10	9	10	10	10	6	9	8	10	8	0	10	10	7	8	10	4	4
Cocklebur	0	0	0	4	2	3	9	3	0	2	0	0	5	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	8	-	9	9	6	6	0	4	6	5	0	3	4	5	5	0	3	0
Crabgrass	9	0	5	8	10	9	10	9	10	8	6	10	10	9	10	9	5	10	9	10	7	10
Giant foxtail	9	0	8	10	10	10	10	10	10	10	8	10	10	10	10	10	10	10	10	10	10	10
Morningglory	0	0	0	0	9	5	4	7	4	3	0	0	3	5	0	0	3	0	0	0	0	0
Nutsedge	0	0	0	0	10	9	-	2	8	8	10	-	0	0	0	-	0	0	0	0	0	0
Rape	0	0	0	0	10	10	9	9	10	9	8	3	10	9	0	5	7	8	10	9	4	0
Redroot pigweed	8	0	0	0	10	10	10	10	10	10	10	10	10	10	8	10	10	10	10	10	10	0
Soybean	0	0	0	0	8	8	5	7	5	5	0	0	-	0	0	0	5	0	0	0	0	0
Sugarbeets	0	0	0	0	10	8	7	9	9	8	0	6	7	7	0	5	0	6	7	7	5	0

Velvetleaf	0	0	0	0	10	5	8	8	10	10	0	0	8	6	0	0	0	5	6	7	3	0
Wheat	0	0	0	0	8	8	7	8	8	8	2	2	7	0	0	6	7	4	7	5	6	0
Wild oats	0	0	0	0	10	10	10	9	10	9	7	7	9	7	2	10	10	6	9	9	5	0

Table B									COMPOUND													
Rate 500 g/ha	520	521	522	523	524	525	526	527	528	531	532	533	534	535	536	540	541	543	544	545	546	549
Preemergence																						
B. signalgrass	0	9	9	5	-	9	-	-	-	-	0	9	-	0	0	8	5	6	8	5	2	0
Bedstraw	0	0	10	0	-	0	-	-	-	-	0	0	-	0	0	0	3	0	9	10	-	5
Blackgrass	0	3	9	7	-	8	-	-	-	-	0	9	-	0	0	9	2	2	6	9	3	-
Cocklebur	0	0	-	0	2	-	0	3	0	0	0	0	0	0	0	10	-	10	0	0	0	0
Corn	0	3	9	9	9	8	2	0	0	0	0	6	3	2	0	2	0	0	0	0	0	0
Crabgrass	10	10	10	10	10	10	10	10	10	10	10	10	10	10	2	10	10	-	10	10	10	10
Giant foxtail	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	10	10	10	10
Morningglory	0	0	4	0	2	6	2	2	3	0	0	0	0	2	-	0	0	0	0	8	0	0
Nutsedge	0	0	10	0	4	0	0	0	0	0	0	0	-	0	0	0	0	8	0	0	0	0
Rape	0	2	6	7	-	4	-	-	-	-	0	7	-	3	0	7	0	0	6	2	0	0
Redroot pigweed	0	0	10	9	-	3	-	4	-	-	0	8	-	4	0	10	0	-	10	10	-	-
Soybean	0	0	10	0	0	0	0	0	0	0	0	0	-	0	0	0	0	2	0	0	0	0
Sugarbeets	0	3	7	9	-	9	8	6	-	-	3	7	-	-	3	4	2	-	4	6	2	3
Velvetleaf	0	3	9	5	4	4	3	2	0	5	4	5	3	-	0	0	0	0	0	0	2	0
Wheat	0	0	8	4	-	3	-	-	-	-	0	0	-	0	0	0	3	0	0	2	0	0
Wild oats	0	2	9	0	-	8	-	-	-	-	0	9	-	0	0	8	5	0	4	6	3	3

Table B									COMPOUND													
Rate 500 g/ha	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571
Preemergence																						
B. signalgrass	10	9	9	8	10	8	9	7	6	9	9	9	10	10	7	0	9	9	9	9	0	9
Bedstraw	3	10	8	10	0	0	0	0	0	0	8	8	0	0	0	0	0	0	8	0	0	0
Blackgrass	9	9	8	-	7	8	10	8	9	10	9	9	10	9	9	0	10	7	9	9	0	9
Cocklebur	0	0	0	10	0	9	0	0	0	2	0	0	2	2	0	0	0	0	2	0	0	0
Corn	0	5	0	3	2	2	0	0	0	6	5	5	9	9	9	0	9	5	9	9	0	0
Crabgrass	10	10	10	10	10	10	10	10	9	10	10	9	10	9	9	2	10	9	10	9	10	3
Giant foxtail	10	10	10	10	10	10	10	10	10	10	10	7	8	10	9	2	10	9	10	10	9	9
Morningglory	0	0	0	2	0	0	0	0	0	8	3	4	8	3	4	0	0	0	6	0	0	4
Nutsedge	6	0	0	0	0	0	0	0	0	-	10	-	-	-	-	0	0	0	3	0	0	0
Rape	9	9	0	-	3	0	8	2	2	10	8	9	10	9	3	0	10	0	7	9	0	2
Redroot pigweed	10	10	4	-	10	7	5	6	2	10	9	9	10	9	3	9	10	9	8	10	8	9

Soybean	0	0	0	3	3	2	0	0	0	3	3	2	9	6	8	0	0	0	9	0	0	3
Sugarbeets	8	9	5	-	6	5	0	4	2	9	7	8	9	4	3	0	6	2	8	3	2	0
Velvetleaf	4	4	0	2	0	6	3	0	0	9	5	2	7	7	8	0	2	0	7	7	0	0
Wheat	2	6	4	-	6	3	4	3	2	9	8	9	9	10	7	0	7	0	5	4	0	9
Wild oats	8	9	6	-	9	7	6	7	2	9	7	9	10	10	7	0	10	0	8	9	0	7

Table B									COMPOUND													
Rate 500 g/ha	572	573	574	575	576	577	578	579	580	581	582	584	585	586	587	588	589	590	591	592	593	594
Preemergence																						
B. signalgrass	0	10	9	-	9	7	9	3	9	9	4	9	9	10	7	8	0	0	0	0	0	7
Bedstraw	0	0	0	0	0	0	0	0	6	9	6	9	8	-	2	-	-	-	-	-	-	9
Blackgrass	0	6	2	2	9	6	4	0	7	7	0	-	8	10	8	8	0	0	0	0	0	9
Cocklebur	0	0	0	0	0	0	3	0	3	0	0	0	3	0	0	0	0	0	0	0	0	2
Corn	0	3	0	3	2	3	4	3	5	9	0	3	5	0	0	5	0	0	0	0	0	4
Crabgrass	0	10	9	9	9	10	10	10	9	9	7	9	10	10	9	9	9	3	0	2	0	9
Giant foxtail	7	10	10	10	9	10	10	10	10	10	8	10	10	10	9	10	10	7	0	0	0	10
Morningglory	0	4	0	2	0	9	0	0	0	6	2	3	5	4	0	0	0	0	0	0	0	6
Nutsedge	0	0	0	-	8	0	0	3	5	8	0	0	10	2	0	0	9	0	0	0	2	6
Rape	0	3	0	2	7	0	4	0	8	7	3	4	10	4	1	0	0	0	0	0	0	9
Redroot pigweed	5	9	9	10	10	0	10	3	10	10	9	9	10	10	2	9	0	0	0	0	0	10
Soybean	0	0	0	0	0	0	0	0	0	7	0	0	3	0	2	5	0	0	0	0	0	4
Sugarbeets	0	2	3	2	6	0	3	0	5	9	0	5	6	8	0	6	0	0	0	0	0	8
Velvetleaf	2	3	2	2	3	4	2	0	5	10	4	5	6	7	2	5	0	0	0	0	0	7
Wheat	0	0	0	0	8	0	2	0	5	5	0	3	3	8	3	8	0	0	0	0	0	2
Wild oats	0	0	3	2	8	0	2	0	5	8	0	9	9	10	9	7	0	0	0	0	0	5

Table B									COMPOUND													
Rate 500 g/ha	595	596	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	615	616	617	618
Preemergence																						
B. signalgrass	9	0	0	3	0	8	7	0	0	0	0	8	10	10	10	10	10	9	0	1	5	0
Bedstraw	10	0	0	0	0	-	0	-	0	0	-	-	-	-	10	10	10	-	0	0	0	0
Blackgrass	10	0	0	6	0	9	9	0	0	0	3	9	9	10	10	10	10	10	4	6	6	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	1	0	8	0	0	0	0
Corn	6	0	0	0	0	3	2	0	0	0	0	6	1	9	8	9	9	9	0	0	0	0
Crabgrass	10	6	0	8	0	10	10	0	1	10	8	9	10	9	10	10	10	10	0	1	8	2
Giant foxtail	9	4	0	10	0	10	10	0	7	10	9	10	10	10	10	10	10	10	7	8	9	0
Morningglory	6	0	0	0	0	0	0	0	0	-	0	0	4	5	8	6	10	10	0	0	0	0
Nutsedge	4	0	0	0	0	-	0	0	0	0	0	0	0	4	3	2	3	2	0	0	5	0

Rape	10	0	0	0	0	5	3	0	0	0	0	7	7	10	10	10	10	10	0	3	0	0
Redroot pigweed	10	0	0	0	0	10	8	0	0	0	0	10	7	10	10	10	10	10	4	10	0	0
Soyb an	4	0	0	0	0	1	0	0	0	0	0	4	4	7	8	7	3	2	0	0	0	0
Sugarbeets	9	0	0	20	0	5	5	0	0	0	0	5	4	8	8	6	7	10	6	1	0	0
Velvetleaf	9	0	0	0	0	7	6	0	0	0	0	8	7	9	10	8	8	8	0	4	0	0
Wheat	6	0	0	0	0	6	0	0	0	0	0	3	0	6	6	7	8	6	0	0	0	0
Wild oats	9	0	0	0	0	8	8	0	0	0	3	6	6	10	10	8	10	10	0	2	3	0

Table B								COMPOUND														
Rate 500 g/ha	619	620	621	622	623	624	625	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641
Preemergence																						
B. signalgrass	3	0	0	4	2	8	10	9	10	8	8	10	10	6	10	9	9	8	8	7	9	8
Bedstraw	0	0	0	2	-	3	-	8	10	8	7	-	-	-	-	9	9	4	-	-	-	-
Blackgrass	0	0	0	6	-	9	9	10	10	10	10	10	10	7	9	8	7	9	9	2	8	8
Cocklebur	0	0	0	-	0	0	0	7	7	7	0	2	0	0	0	0	0	0	9	2	0	0
Corn	2	0	0	0	0	6	3	9	9	8	5	9	5	2	0	8	3	0	8	0	0	2
Crabgrass	8	6	8	8	-	9	10	9	10	10	9	9	9	9	10	9	10	10	10	9	10	9
Giant foxtail	8	9	10	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	9	9
Morningglory	0	0	0	0	0	0	3	8	7	4	2	7	5	0	0	6	2	0	7	0	0	0
Nutsedge	-	0	0	3	0	0	0	10	9	5	3	8	0	0	0	4	10	0	8	0	0	3
Rape	0	0	0	0	2	7	4	10	9	9	0	8	4	4	7	9	10	3	10	10	6	0
Redroot pigweed	0	0	0	10	0	10	8	10	10	10	10	10	10	4	10	10	10	10	10	10	7	7
Soybean	0	0	3	0	0	7	0	5	7	0	3	9	0	0	0	2	4	0	3	3	0	0
Sugarbe ts	0	0	0	3	2	8	0	9	7	7	7	8	0	0	6	9	7	5	10	6	6	0
Velvetleaf	4	0	0	4	0	8	6	10	10	8	7	9	7	0	6	7	4	2	10	3	0	0
Wheat	0	0	0	0	0	7	3	5	10	3	8	9	0	0	0	4	2	0	7	0	2	0
Wild oats	0	0	0	3	2	6	5	5	10	9	8	9	3	5	7	9	5	3	10	3	6	5

Table B								COMPOUND														
Rate 500 g/ha	642	643	645	646	647	648	649	650	652	653	654	655	657	658	659	660	661	662	663	664	665	666
Preemergence																						
B. signalgrass	8	6	0	0	10	5	0	4	2	0	7	0	10	8	8	4	4	7	0	8	8	8
Bedstraw	-	-	-	-	-	0	0	5	0	0	0	0	-	-	-	-	-	-	-	-	-	-
Blackgrass	7	8	0	0	10	5	0	3	2	0	7	3	9	7	9	7	7	9	0	8	9	10
Cocklebur	0	0	0	0	7	0	0	0	3	0	0	0	2	0	0	0	0	2	0	3	0	0
Corn	0	0	0	0	10	0	0	0	0	0	0	0	8	2	9	0	0	3	0	0	3	10
Crabgrass	10	10	5	0	9	9	9	9	9	8	9	9	9	9	10	9	9	6	0	10	10	10
Giant foxtail	10	10	7	0	10	9	9	10	9	8	9	9	9	10	10	10	10	10	9	10	10	10

Morningglory	0	0	0	0	7	0	0	1	0	0	0	0	6	0	6	0	0	1	7	4	4	3
Nutsedg	0	0	0	0	-	0	0	5	3	0	0	0	6	2	0	0	0	7	0	0	-	-
Rape	9	6	0	0	10	0	0	2	0	0	0	0	10	8	10	4	0	0	4	6	9	10
Redroot pigweed	8	5	4	0	10	2	0	9	0	3	5	4	10	10	10	10	8	7	7	10	10	10
Soybean	0	0	0	0	1	0	0	0	0	0	0	0	3	3	2	0	1	0	2	0	2	4
Sugarbeets	4	0	0	0	8	0	0	4	0	0	0	0	9	7	5	0	0	0	0	5	7	8
Velvetleaf	3	0	0	0	9	0	0	0	1	0	0	0	10	5	7	0	0	2	3	5	7	8
Wheat	0	0	0	0	8	0	0	0	0	0	0	0	7	3	7	0	0	0	3	5	4	7
Wild oats	4	1	0	0	10	0	0	0	0	2	2	0	8	4	9	3	0	9	0	7	8	9

Table B								COMPOUND														
Rate 500 g/ha	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	689
Preemergence																						
B. signalgrass	8	9	10	10	9	8	8	8	10	8	5	0	0	0	0	8	9	5	9	9	10	10
Bedstraw	-	-	9	9	-	0	6	0	10	-	-	-	-	-	-	0	0	0	0	0	5	7
Blackgrass	10	10	10	10	10	8	9	9	10	8	0	0	0	4	3	9	9	7	10	9	10	10
Cocklebur	0	0	0	2	1	-	2	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0
Corn	10	9	9	9	9	0	6	8	9	6	0	0	0	0	0	0	3	0	0	4	2	9
Crabgrass	10	8	10	10	9	10	10	9	10	7	7	1	1	3	7	9	10	9	9	10	9	10
Giant foxtail	10	10	10	10	10	10	10	10	10	10	10	4	8	4	9	10	10	10	10	10	10	10
Morningglory	6	5	0	8	8	2	2	7	6	0	0	0	0	0	0	3	2	4	1	0	7	4
Nutsedge	7	0	6	10	6	0	6	6	7	0	0	0	0	0	0	0	0	-	-	0	4	-
Rape	10	9	9	10	8	8	2	8	10	6	0	0	0	0	0	7	0	0	6	6	8	9
Redroot pigweed	10	10	10	10	10	8	10	10	10	10	-	0	1	3	3	7	6	7	8	7	9	8
Soybean	7	6	6	9	3	0	0	7	4	3	0	0	0	0	0	0	0	0	0	0	4	2
Sugarbeets	10	9	9	9	9	8	3	9	10	8	0	0	0	0	0	7	0	0	6	5	9	7
Velvetleaf	10	8	0	8	9	4	8	10	10	7	0	2	0	0	0	0	0	5	0	0	9	4
Wheat	6	7	8	9	8	0	-	8	9	5	0	0	0	0	0	0	0	0	0	0	7	7
Wild oats	10	9	10	9	5	7	8	10	10	4	0	0	0	0	0	8	8	4	4	7	10	9

Table B								COMPOUND														
Rate 500 g/ha	691	692	693	694	695	696	697	698	699	700	701	702	703	704	706	707	708	709	710	711	712	713
Preemergence																						
B. signalgrass	10	9	0	8	6	9	5	5	10	10	0	8	8	9	10	10	0	0	9	8	8	9
Bedstraw	-	1	0	-	0	0	0	0	0	8	0	0	0	-	-	10	0	0	7	7	5	6
Blackgrass	10	10	2	10	9	9	6	8	10	10	6	10	8	10	10	10	5	0	10	9	9	9
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	7	3	0	1	3	5	0	0	9	6	0	4	0	2	7	2	0	0	5	5	0	6

Crabgrass	10	10	0	10	9	10	9	9	10	10	10	10	10	8	9	10	10	7	10	10	10	10
Giant foxtail	10	10	2	10	10	10	10	10	10	10	10	10	10	8	10	10	9	7	10	10	10	10
Morningglory	0	2	0	2	0	0	4	0	6	6	0	0	3	1	2	6	0	0	4	5	0	0
Nutsedge	0	0	0	0	0	-	0	0	0	0	0	0	0	-	4	0	-	-	-	-	0	0
Rape	8	6	0	4	0	3	0	8	9	5	2	2	2	5	7	10	0	0	9	8	8	8
Redroot pigweed	9	9	0	9	5	8	0	0	6	3	0	5	5	9	10	10	6	7	10	10	9	10
Soyb an	2	0	0	0	0	0	0	2	2	0	0	0	0	0	4	0	0	0	6	1	0	3
Sugarbeets	8	3	0	1	0	6	0	0	7	6	0	3	2	5	7	8	0	3	8	8	8	8
Velvetleaf	0	1	0	2	0	4	0	0	7	6	4	2	0	0	7	8	6	0	8	7	6	6
Wheat	3	0	0	0	6	2	2	3	7	0	0	0	3	6	7	6	0	0	8	8	0	5
Wild oats	9	9	0	7	6	8	2	9	10	10	2	9	2	9	8	10	0	0	10	10	8	9

Table B	COMPOUND																					
Rate 500 g/ha	714	715	717	718	719	720	721	723	724	725	726	728	729	730	732	733	734	735	736	737	738	739
Preemergence																						
B. signalgrass	10	10	7	9	9	10	10	2	0	4	9	9	10	9	0	10	9	10	8	9	10	-
Bedstraw	-	-	0	0	0	10	10	0	0	0	0	2	8	4	0	0	0	0	8	0	0	10
Blackgrass	9	10	10	10	10	10	10	2	0	7	9	10	10	10	0	10	10	10	9	10	10	10
Cocklebur	0	0	0	0	0	-	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Corn	6	8	9	3	5	-	8	0	0	0	2	0	9	9	0	0	9	9	2	6	9	2
Crabgrass	10	10	10	10	9	10	9	9	7	8	10	7	10	10	0	9	10	10	9	10	10	10
Giant foxtail	10	10	10	10	10	10	10	10	9	10	10	8	10	10	0	9	10	10	9	10	10	10
Morningglory	3	6	0	0	3	2	5	0	0	3	1	2	8	2	0	2	6	2	6	3	4	0
Nutsedge	0	-	0	0	0	0	3	-	0	0	0	-	2	3	0	-	-	-	10	0	8	0
Rape	10	10	4	3	6	9	10	0	0	0	7	8	10	7	0	5	7	8	2	6	8	2
Redroot pigweed	10	10	8	8	10	10	10	0	0	3	8	9	10	10	0	7	8	9	2	8	8	10
Soybean	0	6	0	0	0	0	7	0	0	0	0	0	2	3	0	0	7	0	2	0	0	0
Sugarbeets	6	8	3	2	8	8	8	0	0	2	5	4	7	7	0	0	8	7	3	6	8	4
Velvetleaf	0	7	0	0	0	3	10	0	0	0	0	0	8	6	0	1	7	3	4	5	8	3
Wheat	6	6	0	2	5	5	8	0	0	0	0	7	6	0	0	0	9	2	8	2	8	3
Wild oats	6	10	10	8	9	9	10	0	0	6	9	10	10	9	0	8	10	10	9	9	10	4

Table B	COMPOUND																					
Rate 500 g/ha	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761
Preemergence																						
B. signalgrass	-	2	0	8	9	10	-	9	10	10	-	-	-	9	9	0	3	7	8	8	10	3
Bedstraw	0	5	0	8	8	5	-	0	0	4	-	10	10	3	0	0	0	0	4	0	6	0
Blackgrass	9	0	0	9	9	9	-	8	9	9	-	10	10	9	9	0	7	7	9	8	9	0

Cockl bur	0	-	0	10	0	0	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Corn	0	0	0	0	7	2	4	9	4	0	6	9	0	0	0	0	0	0	3	0	4	0
Crabgrass	9	10	0	9	10	10	10	10	10	10	10	10	10	9	9	0	9	9	10	9	10	3
Giant foxtail	10	10	0	9	10	10	10	10	10	10	10	10	10	9	9	2	9	9	10	10	10	9
Morningglory	0	0	0	0	0	3	8	7	0	0	6	5	0	0	1	0	0	0	0	0	0	0
Nutsedge	0	0	0	9	7	5	5	-	2	-	9	0	0	0	10	0	7	0	-	0	0	0
Rape	-	0	0	9	9	7	-	-	7	5	-	9	5	7	8	0	0	0	8	4	5	0
Redroot pigweed	10	7	0	10	9	10	-	-	10	9	-	10	10	10	9	0	0	3	10	4	9	0
Soybean	0	0	0	0	0	0	5	9	0	3	5	9	0	0	0	0	0	0	0	0	0	0
Sugarbeets	5	4	0	6	7	4	-	-	7	7	-	7	3	8	7	0	0	0	8	5	6	0
Velvetleaf	3	3	0	3	2	6	8	7	0	2	7	8	2	2	5	0	0	0	7	0	0	0
Wheat	3	4	0	5	5	0	-	-	5	1	-	10	0	3	9	0	0	3	7	8	3	0
Wild oats	6	7	0	9	9	8	-	-	8	8	-	10	8	9	9	0	0	5	9	8	6	0

Table B								COMPOUND								
Rate 500 g/ha	762	763	764	765	766	767	772	773	774	775	777	778	780	790	791	792
Preemergence																
B. signalgrass	9	8	10	7	10	-	0	0	0	-	-	-	4	9	-	-
Bedstraw	0	8	8	8	9	8	0	0	0	2	0	10	2	9	-	-
Blackgrass	9	10	9	9	9	10	0	0	0	10	10	10	9	10	-	-
Cocklebur	0	0	8	0	0	0	0	0	0	0	0	0	2	10	0	0
Corn	0	0	9	2	3	5	0	0	0	3	0	0	9	9	0	4
Crabgrass	10	9	10	10	10	10	0	0	0	10	10	10	10	10	10	10
Giant foxtail	9	9	10	10	10	10	0	0	0	10	10	10	10	10	10	10
Morningglory	0	5	2	0	3	0	0	0	0	2	5	0	2	7	0	0
Nutsedge	6	5	4	0	4	0	0	0	0	0	-	9	-	0	0	0
Rape	0	9	10	8	9	10	0	0	0	0	2	5	6	8	-	-
Redroot pigweed	3	10	10	10	10	10	0	0	0	9	2	9	6	10	-	-
Soybean	0	0	5	0	0	2	0	0	0	1	0	1	3	2	5	0
Sugarbeets	4	6	8	9	9	9	0	0	0	3	3	6	6	7	-	-
Velvetleaf	5	3	8	7	10	2	0	0	0	0	0	0	5	7	0	5
Wheat	0	7	7	8	10	5	0	0	0	8	9	8	9	9	-	-
Wild oats	0	9	7	9	10	9	0	0	0	8	9	8	9	10	-	-

Table B												COMPOUND														
Rate 250 g/ha	7	18	30	35	36	46	47	69	70	71	72	78	86	87	93	94	103	105	107	108	109	111	113	116	117	118
Pre-emergence																										
Barnyardgrass	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	119	121	122	123	124	125	129	131	139	146	154	165	166	177	180	181	182	183	184	185	186	187
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	9	9	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ric	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	189	190	191	192	193	194	195	196	197	198	200	201	202	203	204	205	206	207	208	210	211	212
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	257	258	259	264	265	266	267	268	269	270	271	272	273	274	276	277	278	279	280	281	282	283
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	9	0	4	0	8	1	0	0	0	4	9	6
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0

Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Table B	COMPOUND																					
Rate 250 g/ha	284	285	286	288	289	290	291	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307
Pr -emergence																						
Barnyardgrass	4	7	0	9	3	4	4	0	9	0	0	0	0	6	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Table B	COMPOUND																					
Rate 250 g/ha	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329
Pre-emergence																						
Barnyardgrass	0	0	4	0	0	0	0	8	9	0	0	0	0	0	7	0	0	0	8	3	0	0
Ducksalad	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B	COMPOUND																					
Rate 250 g/ha	330	331	332	333	334	335	336	337	338	339	340	341	346	350	351	353	354	358	365	366	367	368
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	9	10	9	0	0	0	0	0	9	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	2	9	0	0	0	2	0	8	0	0	0	2
Table B	COMPOUND																					
Rate 250 g/ha	369	370	371	372	373	374	375	376	378	379	380	381	382	383	384	385	387	388	389	390	391	392
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	1	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B	COMPOUND																					
Rate 250 g/ha	393	394	395	401	402	403	404	405	406	407	408	409	411	414	437	438	439	441	442	443	444	445
Pre-emergence																						
Barnyardgrass	0	6	0	0	8	2	9	0	0	0	0	3	9	0	0	0	0	0	0	0	0	0
Ducksalad	0	3	0	0	0	0	5	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Ric	0	1	0	0	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

S. Flatsedge	0	8	0	0	0	0	8	0	0	0	0	2	9	0	0	0	0	0	0	0	0	0

Tabl B	COMPOUND																					
Rate 250 g/ha	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	465	466	467	468
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Tabl B	COMPOUND																					
Rate 250 g/ha	469	470	471	472	473	474	476	477	478	479	480	482	483	485	486	487	488	489	490	492	493	494
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	495	496	498	499	509	521	528	529	531	532	538	539	546	550	552	556	558	560	561	567	568	570
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	2	0	0	0	3	0
Ducksalad	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	-	-	0	9	-	0	-	0	-	0	-	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	577	580	586	587	588	589	590	591	592	593	594	595	596	598	599	600	601	602	603	604	605	606
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	627	628	629
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	630	631	632	633	634	636	637	638	639	640	641	642	643	644	645	646	647	649	650	651	655	656
Pre-emergence																						
Barnyardgrass	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	657	658	659	660	661	662	663	664	665	666	667	668	671	674	675	676	677	678	679	680	681	692
Pre-emergence																						
Barnyardgrass	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	9
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9

Table B	COMPOUND																
Rate 250 g/ha	694	695	696	697	699	701	702	705	706	715	720	721	724	740	741	758	765
Pre-emergence																	
Barnyardgrass	0	0	0	0	8	0	0	2	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	5	-	0	2	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																												
Rate 250 g/ha	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Postemergence																													
B. signalgrass	7	0	0	0	0	2	0	0	0	4	0	0	2	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0
Barnyardgrass	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	9	0	0	0	0	0	0	0	0	8	9	0
Bedstraw	0	0	0	7	4	0	0	2	0	0	0	0	0	0	0	0	3	7	7	4	0	4	0	8	7	0	0	8	0
Blackgrass	0	4	0	5	5	7	2	2	0	4	0	0	3	0	0	0	4	3	0	0	0	3	0	3	6	0	0	6	0
Cocklebur	0	0	0	6	5	0	0	0	0	1	0	0	0	0	5	0	2	1	0	0	5	0	0	1	2	0	0	3	0
Corn	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	5	0	0	8	6	2	1	0	0	9	0	0	5	0	3	0	6	7	0	3	0	9	6	9	9	1	0	9	0
Ducksalad	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0
Giant foxtail	2	7	3	3	7	4	3	0	0	8	0	0	2	0	0	0	2	1	0	1	0	4	2	3	8	0	0	4	0
Morningglory	0	0	0	3	3	2	-	0	0	2	0	0	0	4	6	1	7	2	0	7	2	2	10	10	2	3	0	2	0
Nutsedge	0	0	0	0	0	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Redroot pigweed	4	0	0	5	7	0	0	0	0	0	0	0	0	3	2	0	2	1	2	3	0	2	0	6	0	0	0	2	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0
S. Flatsedge	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	0	0	0	0	0
Soybean	0	1	1	4	5	3	1	4	0	3	0	0	2	2	2	1	2	3	3	3	2	4	4	3	3	2	2	3	2
Sugarbeets	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	3	0	0	-	0	0	0	0	0	0	0	1	0
Velv tleaf	0	0	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0

Table B	COMPOUND																												
Rate 250 g/ha	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
Postemergence																													
B. signalgrass	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Barnyardgrass	0	0	8	3	0	0	2	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0
Bedstraw	0	0	0	2	6	3	-	0	0	-	-	-	0	0	0	-	-	6	0	5	-	0	8	-	4	0	0	0	0
Blackgrass	2	9	7	5	6	1	4	0	7	0	4	3	0	0	0	4	6	0	0	0	-	0	0	0	0	0	0	0	0
Cocklebur	0	1	0	6	0	4	0	0	1	0	0	1	0	0	0	2	1	2	0	0	-	0	0	4	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	3	0	0	0	0	0	0
Crabgrass	9	9	3	2	3	1	3	0	8	3	6	5	0	2	0	2	3	0	3	8	-	3	5	6	2	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0
Giant foxtail	3	4	0	3	2	1	3	0	4	0	1	1	0	0	0	9	1	0	2	9	-	0	3	3	3	0	0	0	0
Morningglory	6	3	8	9	5	8	9	0	1	0	6	2	0	3	0	0	1	4	0	0	-	0	1	5	2	2	1	1	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Rape	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	3	6	9	7	0	0	0	2	3	0	-	0	0	0	0	0	0	-	0	0	6	2	0	0	0	0
Rice	0	0	0	2	0	0	0	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	2	2	0	0	0	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0
Soyb an	2	1	2	3	0	1	5	0	0	4	4	4	0	3	1	1	1	2	1	1	-	0	2	3	0	1	2	1	1
Sugarbeets	0	0	0	6	0	-	0	0	0	0	2	0	0	1	0	1	0	0	0	0	-	0	0	1	0	0	0	0	0
Velvetleaf	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	1	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	-	0	0	0	0	0	0	0	0
Wild oats	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	1	0	0	0	0	0	0

Tabl B	COMPOUND																												
Rate 250 g/ha	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
Postemergence																													
B. signalgrass	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6	5	0	4	0	0	4	0	0	-	0	0	0
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0	0	0	3	3	8	0	0	0	0	0	0	0

Bedstraw	0	7	6	2	3	0	0	0	7	7	5	0	0	0	7	5	0	2	0	4	7	0	2	0	0	-	0	6	6
Blackgrass	0	0	6	0	0	0	0	2	0	2	0	0	0	0	0	0	7	6	0	3	3	3	4	0	0	-	0	1	1
Cocklebur	0	0	0	6	0	0	0	0	1	2	0	0	0	0	0	0	1	3	0	2	2	0	0	0	1	-	0	2	2
Corn	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	00	0
Crabgrass	2	1	0	0	0	0	0	0	0	0	1	0	0	0	2	4	9	8	0	5	4	9	8	0	0	-	0	5	5
Ducksalad	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Giant foxtail	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-	8	7	0	3	3	3	6	0	0	-	0	3	3
Morningglory	1	2	4	2	4	0	1	1	2	2	0	0	0	0	4	3	1	4	0	10	7	10	2	10	0	-	0	7	7
Nutsedge	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	-	0	2	2
Redroot pigweed	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	4	0	0	0	-	0	5	5
Rice	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	2	0	0	-	-	-	-	0	0	0	0	0	0	4	3	0	0	0	0	0	0	0
Soybean	2	3	4	2	2	0	1	2	1	3	2	0	0	0	3	1	2	2	1	2	1	1	1	0	0	-	0	2	2
Sugarbeets	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	4	4	0	0	0	-	0	3	3
Velvetleaf	0	0	0	2	5	0	3	0	0	2	0	0	0	0	4	4	0	3	0	3	0	0	0	0	2	-	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	-	0	0	0
Wild oats	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	-	0	0	0

Table B	COMPOUND																								
Rate 250 g/ha	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
Postemergence																									
B. signalgrass	0	0	0	8	7	8	0	3	0	0	0	0	0	0	0	0	0	3	0	8	3	8	0	0	0
Barnyardgrass	-	0	0	-	-	0	0	0	0	0	9	0	-	0	0	-	-	0	0	-	0	0	0	0	0
Bedstraw	9	0	-	-	-	-	-	0	0	1	-	8	0	-	0	0	-	2	3	4	2	9	8	7	7
Blackgrass	6	0	0	8	7	8	3	4	0	3	0	6	0	0	0	4	5	7	1	8	7	8	4	5	5
Cocklebur	1	2	3	4	2	2	1	1	0	1	0	2	0	0	0	0	2	1	2	1	0	4	2	2	2
Corn	0	0	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	3	0	0	0
Crabgrass	9	0	2	9	9	9	8	6	3	4	2	4	0	0	0	6	5	7	3	9	8	9	3	3	4
Ducksalad	-	0	0	-	-	0	0	0	0	2	3	2	-	0	0	-	-	0	0	-	0	0	0	0	0
Giant foxtail	3	0	1	8	9	9	5	1	0	3	2	2	0	0	0	3	4	7	3	8	8	9	5	5	7
Morningglory	10	0	4	8	10	10	10	2	1	3	2	3	0	1	1	10	10	3	8	3	3	5	5	5	10
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4	0	0	0	0
Rape	0	0	0	4	4	4	2	0	0	0	0	4	0	0	0	1	0	0	0	3	0	4	4	3	3
Redroot pigweed	3	0	6	6	4	7	2	3	0	-	0	5	0	0	0	2	3	0	0	5	0	8	5	4	5
Rice	-	0	0	-	-	0	0	2	0	0	6	0	-	0	0	-	-	0	0	-	0	0	0	0	0
S. Flatsedge	-	0	0	-	-	0	0	0	0	0	8	0	-	0	0	-	-	0	0	-	0	0	0	0	0

Soybean	1	0	4	4	3	5	5	1	1	1	1	3	0	3	0	4	5	3	1	4	5	7	5	4	4
Sugarbeets	7	0	3	6	6	3	2	4	0	0	0	4	0	0	0	2	1	0	0	5	2	6	3	3	3
Velvetleaf	0	0	0	3	0	0	4	0	0	2	0	3	0	0	0	1	3	3	2	5	4	6	1	0	1
Wheat	0	0	0	4	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	5	0	0	0
Wild oats	0	0	0	3	1	2	0	0	0	0	0	0	0	0	0	0	0	2	0	5	3	4	0	1	0

Table B	COMPOUND																					
Rate 250 g/ha	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134
Postemergence																						
B. signalgrass	8	5	0	9	9	2	3	7	3	0	3	0	0	0	0	0	4	7	8	4	2	0
Barnyardgrass	0	0	0	0	2	-	-	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
Bedstraw	7	6	4	9	2	0	4	-	-	-	-	-	-	0	0	0	3	6	9	2	7	4
Blackgrass	8	7	6	9	9	7	7	6	2	4	6	0	0	0	0	0	3	7	8	8	2	0
Cocklebur	1	0	1	3	0	0	0	3	2	3	0	0	0	0	0	0	0	0	5	0	2	0
Corn	5	0	0	2	6	0	0	2	0	0	0	0	0	0	0	0	2	2	6	4	0	0
Crabgrass	9	9	2	9	9	7	8	9	9	4	8	0	0	0	0	0	8	9	8	8	4	4
Ducksalad	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
Giant foxtail	9	9	5	9	9	9	8	8	7	6	8	0	0	0	0	0	9	9	9	9	3	0
Morningglory	8	4	6	4	7	5	7	8	6	4	10	0	2	0	0	0	8	2	8	6	4	8
Nutsedge	0	0	0	8	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Rape	7	3	0	8	2	0	2	0	2	3	0	0	0	0	0	0	0	-	7	0	0	0
Redroot pigweed	6	3	0	8	0	0	2	0	3	2	2	0	0	0	0	0	2	3	8	0	0	0
Rice	0	0	0	0	0	-	-	0	2	0	0	0	0	0	0	0	-	-	-	-	-	-
S. Flatsedge	0	0	0	0	0	-	-	0	5	0	0	0	0	0	0	0	-	-	-	-	-	-
Soybean	7	5	4	6	5	2	4	4	6	3	4	4	4	0	0	0	4	3	8	4	3	1
Sugarbeets	5	4	3	8	3	0	0	0	4	0	1	0	0	0	0	0	0	2	6	0	0	0
Velvetleaf	7	3	0	7	6	0	3	2	4	3	0	0	0	0	0	0	0	5	8	3	2	0
Wheat	4	0	0	7	6	0	3	0	0	0	1	0	0	0	0	0	2	3	5	2	0	0
Wild oats	6	2	0	7	4	0	3	0	0	0	0	0	0	0	0	0	2	5	9	2	0	0

Table B	COMPOUND																					
Rate 250 g/ha	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156
Postemergence																						
B. signalgrass	0	1	5	8	6	0	0	0	0	1	0	8	8	5	0	0	6	0	0	0	0	0
Barnyardgrass	0	0	0	8	0	2	0	2	8	0	7	1	6	0	0	0	0	0	0	0	0	0
Bedstraw	2	8	8	8	5	5	2	3	6	3	3	7	7	6	0	0	4	0	0	0	0	0
Blackgrass	0	3	8	9	7	4	0	0	5	5	5	8	8	7	0	0	8	0	0	0	2	0
Cocklebur	0	2	3	2	2	3	0	0	3	0	0	3	0	0	0	0	2	0	0	0	0	0

Corn	0	0	3	7	2	0	0	0	0	0	0	0	6	0	0	0	2	0	0	0	2	0
Crabgrass	0	8	9	9	9	9	4	4	8	9	8	9	9	8	0	2	9	2	0	1	8	0
Ducksalad	0	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Giant foxtail	0	7	9	9	9	4	0	2	5	5	2	9	8	8	0	2	8	0	0	1	6	0
Morningglory	1	10	7	6	6	8	3	4	8	2	10	8	3	3	0	0	6	0	0	1	2	2
Nutsedge	0	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
Rape	0	2	6	2	2	1	0	0	0	0	3	3	4	3	0	0	0	0	0	0	0	0
Redroot pigweed	0	6	5	7	4	2	2	0	5	0	0	6	5	-	0	0	5	0	0	2	0	0
Rice	0	0	0	8	0	2	0	2	2	0	0	2	2	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	7	0	0	0	0	2	0	5	3	3	0	0	0	0	0	0	0	0	0
Soybean	3	4	7	4	4	3	3	3	4	3	4	6	6	4	0	1	4	1	0	2	1	1
Sugarbeets	0	7	5	6	2	0	0	0	6	0	0	4	2	4	0	0	3	0	0	0	0	0
Velvetleaf	0	0	4	4	5	0	0	2	2	0	0	6	0	0	0	0	3	0	0	0	0	0
Wheat	0	0	5	8	4	0	0	0	0	0	0	5	5	3	0	0	4	0	0	0	0	0
Wild oats	0	0	4	3	4	0	0	0	0	0	0	6	5	5	0	0	6	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178
Postemergence																						
B. signalgrass	0	0	0	0	2	0	5	0	5	0	0	0	0	9	0	0	0	0	0	0	0	0
Barnyardgrass	0	0	0	0	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	0	-
Bedstraw	0	0	0	0	4	3	7	-	4	1	8	8	7	0	8	8	4	6	0	2	5	0
Blackgrass	0	2	0	0	3	0	6	0	7	7	5	2	5	9	0	5	2	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	3	0	0	0	0	2	0	0	3	0	1	2	2	2	0	0
Corn	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	2	3	0	0	7	6	8	2	9	3	9	2	9	9	2	9	5	7	0	3	2	0
Ducksalad	0	0	0	0	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	2	-
Giant foxtail	4	4	0	0	3	2	8	0	5	1	0	1	6	8	0	0	0	0	0	0	0	0
Morningglory	1	2	3	0	7	10	5	0	3	2	5	10	5	1	2	5	10	5	3	2	2	2
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	2	0	0	4	0	3	0	4	2	3	0	0	6	0	3	0	6	0	0	0	-
Rice	0	0	0	0	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	0	-
S. Flatsedge	0	0	0	0	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	0	-
Soybean	1	4	3	0	4	4	3	2	6	2	3	2	3	4	1	3	2	2	1	2	2	2
Sugarbeets	0	0	0	0	4	0	4	0	3	0	0	0	0	2	2	0	0	6	0	0	0	0
Velvetleaf	0	0	0	0	2	4	6	0	1	0	0	1	0	5	0	0	0	0	3	2	0	0

Wheat	0	0	0	0	0	0	2	0	2	0	0	0	0	6	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	3	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0
Table B	COMPOUND																					
Rate 250 g/ha	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-
Bedstraw	5	0	0	0	7	3	3	8	0	3	0	0	0	0	0	0	-	0	0	0	0	0
Blackgrass	4	0	0	0	0	3	0	4	0	0	0	0	0	0	0	2	5	0	0	0	9	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	2	2	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	2	0	0	0	0	0	-	2	0	3	0	0	3	1	0	0	2	0	0	0	8	2
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-
Giant foxtail	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	1	0	0	0	2	0
Morningglory	5	0	0	0	1	6	1	2	0	0	0	0	2	6	1	1	1	0	5	2	4	2
Nutsedge	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Redroot pigweed	4	0	0	0	0	7	3	0	0	0	0	0	0	3	0	0	2	0	0	0	2	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
Soybean	1	0	0	0	2	3	3	2	0	2	0	0	3	3	1	0	4	0	0	0	7	2
Sugarbeets	2	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V lvetleaf	0	0	0	0	0	1	0	0	0	0	0	0	2	3	0	0	2	0	0	0	0	1
Wh at	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	201	202	203	204	205	206	207	208	210	211	212	213	214	215	216	217	218	219	220	221	222	223
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	7	2	0	3	5	7	3	5	8	8	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	4	0	6	0	0	5	0	4	-	2	3	2	6	2	0	-	8	8	9	4	4
Blackgrass	0	5	0	3	0	0	2	0	0	4	6	2	4	4	8	6	7	8	8	9	3	3
Cocklebur	0	2	0	1	1	0	0	0	0	0	2	0	0	0	0	0	3	4	3	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4	6	0	0	0
Crabgrass	0	1	0	2	1	0	2	0	0	1	8	2	3	2	4	3	5	6	7	8	0	1
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Giant foxtail	0	0	0	0	0	0	1	0	0	2	6	2	0	3	4	7	7	8	8	7	0	0
Morningglory	1	8	0	3	1	2	2	1	3	6	4	7	6	3	7	0	8	7	8	0	3	4
Nutsedge	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	1	0	0	0	0	0	0	0	2	0	3	3	0	0	0	6	7	3	4	0	0
Redroot pigweed	0	6	0	4	0	3	0	0	2	4	-	7	1	6	2	0	3	8	3	8	0	3
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	3	0	1	2	2	2	2	1	4	3	2	3	1	1	1	6	7	7	3	3	3
Sugarbeets	3	4	0	0	0	0	0	0	0	2	0	4	0	0	0	0	2	4	2	4	0	2
Velvetleaf	1	0	0	1	0	0	1	1	2	1	5	0	0	0	0	0	2	2	2	0	2	2
Wheat	0	0	0	0	0	0	0	0	0	0	0	2	3	6	0	3	0	7	6	4	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	4	2	2	0	0

Table B	COMPOUND																					
Rate 250 g/ha	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245
Postemergence																						
B. signalgrass	0	5	6	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	8	9	0	6
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	4	0	5	8	0	0	0	0	2	3	0	0	0	2	8	3	3	7	7	5	0	9
Blackgrass	3	9	8	7	0	0	0	0	6	2	0	0	0	0	0	2	0	8	9	9	0	7
Cocklebur	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	1	1	1	7	4	0	0
Corn	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
Crabgrass	3	9	3	0	0	0	0	0	1	1	0	0	0	0	2	2	2	8	9	9	0	8
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	4	8	7	0	0	0	0	0	2	3	0	0	0	0	0	1	0	6	8	8	0	8
Morningglory	5	6	7	8	3	0	2	3	8	3	1	6	5	3	3	3	10	5	7	7	0	9
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0
Rape	0	0	0	0	0	0	0	0	2	2	0	0	0	0	4	0	0	2	4	2	0	2
Redroot pigweed	4	0	0	5	0	0	0	0	6	2	0	0	0	2	0	3	2	0	4	7	0	9
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	5	3	4	1	1	4	1	4	3	0	0	2	1	1	1	2	3	6	5	0	4
Sugarbeets	4	3	0	3	3	0	0	0	2	0	0	0	0	0	0	0	0	0	5	2	0	3
Velvetleaf	0	0	0	0	0	0	0	0	2	3	0	0	1	0	2	3	1	0	7	4	0	4
Wheat	0	7	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	7	0	6
Wild oats	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	4	3	0	5

Table B COMPOUND

Rate 250 g/ha	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	2	0	0	4	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	9	0	0	0	9	7	0	0	4	2	0	0	7	-	-	-	-	-	6	3	5	4
Blackgrass	6	0	0	0	2	8	5	0	0	7	0	1	7	0	0	0	0	3	3	5	6	5
Cocklebur	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	1
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	6	6	0	0	2	1	2	2	0	0	0	0	0	0	2	3	3
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	5	0	0	0	0	7	4	0	0	6	0	0	4	0	0	0	0	0	0	2	5	2
Morningglory	9	2	0	0	6	7	3	0	9	8	-	8	7	7	3	6	5	4	10	6	5	3
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	3	0	0	0	2	3	2	2	0	0	0	0	0	0	0	1	6	0
Redroot pigweed	2	0	0	0	0	2	0	0	3	2	4	4	2	6	3	1	3	0	0	3	5	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	3	0	0	4	2	4	1	0	2	6	4	3	5	4	1	4	3	1	3	3	7	3
Sugarb ets	0	0	0	0	3	0	0	0	0	0	3	2	0	2	2	0	0	0	1	3	3	2
Velvetl af	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	2	5	1
Wheat	2	0	0	0	0	0	0	0	0	4	0	0	4	3	0	0	0	0	0	0	5	3
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2

Table B	COMPOUND																					
Rate 250 g/ha	268	269	270	271	272	273	274	276	277	278	279	280	281	282	283	284	285	286	288	289	292	293
Postemergence																						
B. signalgrass	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	7
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	4	0	8	0	0	0	3	8	6	0	0	-	7	5	6	7	5	0	8	0	3
Blackgrass	0	2	0	8	2	2	0	4	8	0	2	0	0	5	7	7	7	5	2	9	0	9
Cocklebur	0	1	0	1	1	0	0	0	1	0	0	0	0	2	2	2	0	0	1	2	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	1	0	1	0	6	5	0	0	0	0	0	1	1	7	2	3	9	0	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	4	0	0	0	4	4	0	0	0	0	0	4	3	0	2	0	7	0	8
Morningglory	2	5	0	8	1	2	0	6	8	4	2	0	3	7	9	7	5	8	8	8	2	5
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

Rape	0	0	0	4	0	0	0	0	3	0	0	0	0	6	4	4	0	5	3	2	0	0
Redroot pigweed	0	5	0	7	2	2	1	1	4	0	2	0	5	7	5	6	0	6	0	7	0	2
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	0	3	2	5	1	3	5	6	6	1	2	3	3	4	5	4	3	2	2	4	1	2
Sugarbeets	0	0	0	4	0	0	0	2	4	0	0	0	0	7	2	5	3	2	0	0	0	3
Velvetleaf	0	3	0	0	0	0	0	0	1	0	0	0	1	3	1	2	1	0	1	3	0	2
Wheat	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	7	0	7
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0	3

Table B

COMPOUND

Rate 250 g/ha	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
Postemergence																						
B. signalgrass	0	5	0	0	0	7	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	8	4	0	-	-	-	0	-	0	-	-	-	0	0	0	0	7	0	0	7	-	6
Blackgrass	7	9	0	0	0	8	0	0	0	0	0	0	0	0	0	0	9	0	0	0	5	5
Cocklebur	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0
Corn	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Crabgrass	2	8	0	0	0	4	0	0	0	0	0	0	0	0	0	0	9	0	0	0	4	5
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	2	9	0	0	0	8	0	0	2	0	0	0	0	0	0	0	8	0	0	0	3	4
Morningglory	9	7	1	0	3	6	0	0	2	0	3	0	-	2	2	2	7	8	0	3	3	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0
Rape	2	3	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	7	0	0	0	6	0	0	2	2	5	4	0	0	0	0	3	0	0	2	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	4	1	3	3	6	2	0	3	3	5	4	2	2	1	2	4	3	3	3	4	3
Sugarbeets	0	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
Velvetleaf	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
Wheat	0	3	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6	0	0	0	3	0
Wild oats	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0

Table B

COMPOUND

Rate 250 g/ha	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337
Postemergence																						
B. signalgrass	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	8	0	-	-	8	4	-	0	-	7	7	4	-	-	-	0	0	-	0	0	2
Blackgrass	4	8	0	0	0	0	1	0	0	3	0	3	5	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	5	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	8	0	0	0	2	2	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	2	8	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morningglory	5	3	3	4	3	8	7	2	0	8	-	8	10	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	1	1	0	0	3	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	3	3	0	0	6	4	3	0	0	4	4	6	3	0	0	0	3	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	6	1	1	3	3	4	2	1	1	5	6	5	1	1	0	2	2	0	2	1	1
Sugarbeets	0	1	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Wheat	2	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B

	COMPOUND																					
Rate 250 g/ha	338	339	340	341	342	343	344	345	348	349	350	351	352	353	354	355	356	357	358	359	360	361
Postemergence																						
B. signalgrass	0	0	0	0	0	4	0	0	4	0	0	0	7	0	0	0	1	4	1	0	5	3
Barnyardgrass	-	-	-	-	9	0	0	0	3	9	3	3	3	-	7	8	7	4	9	0	6	-
Bedstraw	2	7	7	4	5	0	0	0	4	-	-	-	2	-	-	0	3	0	3	0	2	8
Blackgrass	0	0	3	2	2	5	0	0	6	4	7	4	8	4	7	6	6	6	8	0	6	8
Cocklebur	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	2	0	0	0	6	0
Crabgrass	0	0	0	0	0	3	0	0	6	1	7	4	3	2	2	2	0	2	4	0	5	2
Ducksalad	-	-	-	-	2	0	0	0	3	0	3	4	2	-	3	0	2	0	5	0	0	-
Giant foxtail	0	0	0	0	2	8	0	0	9	5	8	8	9	7	8	4	7	9	8	0	8	5
Morningglory	0	8	10	8	-	4	0	0	10	10	6	6	7	4	7	7	6	6	7	0	4	7
Nutsedge	0	0	0	0	0	2	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	0
Rape	0	3	6	2	4	0	0	0	0	0	0	2	0	2	3	0	0	0	2	0	0	3
Redroot pigweed	0	4	6	3	5	3	0	0	2	3	2	3	3	4	4	0	0	5	4	0	3	6
Rice	-	-	-	-	0	0	0	0	0	0	0	0	3	-	0	0	0	2	0	0	3	-

S. Flatsedge	-	-	-	-	7	0	0	0	6	7	7	6	7	-	8	8	7	0	9	0	4	-
Soybean	2	2	2	2	6	3	2	0	3	2	1	2	4	6	7	2	3	2	5	2	2	5
Sugarbeets	0	0	3	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	2	0	2	5
Velvetleaf	0	0	0	1	0	2	0	0	5	0	0	2	2	2	0	0	0	3	2	0	0	0
Wheat	0	0	0	0	0	5	0	0	3	3	0	2	4	0	0	2	3	6	3	0	4	0
Wild oats	0	0	0	0	0	4	0	0	3	2	3	2	2	0	0	5	3	5	5	0	3	6

Table B	COMPOUND																					
Rate 250 g/ha	362	363	364	365	367	368	369	370	371	372	373	374	375	376	378	379	380	381	382	383	384	385
Postemergence																						
B. signalgrass	7	1	0	0	0	6	0	4	3	4	0	0	2	0	0	0	0	0	0	0	6	6
Barnyardgrass	-	-	0	-	-	-	0	0	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	9	7	0	-	-	4	-	-	-	-	-	-	-	-	0	0	-	0	4	0	0	0
Blackgrass	8	7	0	0	0	8	5	4	6	7	0	0	5	0	0	0	0	0	2	2	9	2
Cocklebur	-	2	0	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Corn	0	2	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	6	5	0	0	8	8	2	7	8	8	1	0	7	0	0	0	2	0	0	4	8	9
Ducksalad	-	-	0	-	-	-	2	3	-	6	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	9	6	0	8	9	2	8	8	9	3	2	8	0	3	2	9	0	3	6	9	9
Morningglory	1	1	0	0	6	5	10	10	7	7	8	10	5	0	10	8	5	2	0	0	0	2
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	2	0	2	0	3	2	2	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	6	2	0	0	0	4	0	0	2	6	4	2	0	0	0	1	0	0	0	0	0	0
Rice	-	-	0	-	-	-	0	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	0	-	-	-	2	4	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	6	6	3	2	1	5	1	3	1	2	4	2	1	0	0	1	1	2	4	3	3	2
Sugarbeets	2	3	0	0	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	7	3	0	0	2	3	0	0	2	2	1	0	2	0	0	0	0	0	0	0	0	0
Wheat	6	5	0	0	0	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0
Wild oats	6	1	0	0	0	3	0	3	3	5	0	0	6	0	0	0	0	0	0	0	0	2

Table B	COMPOUND																					
Rate 250 g/ha	387	388	389	390	391	392	393	394	395	396	397	398	400	401	402	403	404	405	406	407	408	409
Postemergence																						
B. signalgrass	3	8	0	5	0	7	0	2	0	0	2	2	3	0	2	3	-	0	0	0	0	8
Barnyardgrass	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-	-	-	-
Bedstraw	0	-	5	-	-	-	-	5	0	-	-	-	-	-	7	-	8	-	-	-	8	2
Blackgrass	7	-	6	9	0	10	3	9	0	3	9	9	8	0	-	10	10	0	0	0	9	9

Cocklebur	0	0	0	3	0	2	0	0	0	0	0	0	0	0	4	0	2	0	0	0	0	-
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Crabgrass	2	8	4	7	0	7	5	8	2	2	9	9	6	2	5	8	5	0	0	1	8	9
Ducksalad	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-	-	-	-
Giant foxtail	3	8	7	9	0	9	9	8	5	2	9	9	9	2	9	9	9	0	0	3	9	9
Morningglory	1	4	8	7	0	7	0	6	0	8	5	3	3	6	8	8	7	5	2	10	7	9
Nutsedge	0	5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Rape	0	-	2	10	0	0	3	0	0	0	0	2	0	-	8	4	4	0	0	0	-	3
Redroot pigweed	0	0	0	9	0	6	0	2	0	0	4	3	0	1	5	1	5	0	0	0	0	4
Rice	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-	-	-	-
Soybean	0	1	2	3	0	2	2	5	1	3	5	4	4	1	6	6	6	2	2	2	3	5
Sugarbeets	0	0	0	5	0	0	0	1	0	0	0	0	0	0	2	0	1	0	0	0	0	0
Velvetleaf	0	2	0	7	0	2	0	0	2	0	0	0	0	0	4	0	0	0	0	0	0	0
Wheat	0	3	0	3	0	0	0	3	0	0	2	0	0	0	0	1	0	0	0	0	1	4
Wild oats	0	0	0	7	0	7	0	6	0	0	2	0	0	0	0	2	5	0	0	0	2	0

Table B	COMPOUND																					
Rate 250 g/ha	410	411	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433
Postemergence																						
B. signalgrass	5	5	1	2	8	0	0	0	5	7	0	0	0	7	7	0	0	0	6	0	0	3
Barnyardgrass	-	-	-	0	0	0	0	0	0	2	0	0	0	1	0	0	2	1	0	0	0	0
Bedstraw	-	7	-	-	-	0	-	0	3	7	-	-	0	-	9	-	-	-	0	-	-	5
Blackgrass	9	9	5	8	9	0	4	0	6	8	0	0	0	8	8	0	3	3	7	2	4	7
Cocklebur	0	3	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	1	5	0	0	0	0	3	0	0	0	0	2	0	0	0	2	0	0	0
Crabgrass	8	8	6	8	9	2	3	0	8	8	0	0	0	8	9	1	0	2	8	0	6	4
Ducksalad	-	-	-	0	0	2	2	0	0	2	0	0	0	0	0	0	3	6	0	0	0	0
Giant foxtail	9	9	6	9	9	1	8	1	8	9	0	0	0	8	9	3	0	2	9	0	6	6
Morningglory	8	6	7	6	9	9	8	5	4	9	0	-	0	6	9	0	2	2	3	1	1	4
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Rape	7	7	0	0	3	0	0	0	0	3	0	0	0	2	2	0	0	0	0	0	0	0
Redroot pigweed	0	7	0	0	2	0	0	0	0	5	0	0	0	2	5	0	0	0	3	0	0	2
Rice	-	-	-	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0
S. Flatsedge	-	-	-	3	0	9	4	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0
Soybean	5	5	2	4	6	4	4	3	3	7	3	2	1	2	6	1	2	2	3	1	2	2
Sugarbeets	7	4	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0

Velvetleaf	0	4	0	2	0	0	0	0	0	4	0	0	0	0	1	2	2	2	0	0	0	2
Wheat	0	4	0	2	5	0	0	0	0	5	0	0	0	3	0	0	0	0	0	0	0	0
Wild oats	5	3	0	2	4	0	0	0	0	4	0	0	0	2	2	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455
Postemergence																						
B. signalgrass	0	1	0	0	0	0	2	0	0	0	4	0	6	0	0	0	0	0	0	2	0	1
Barnyardgrass	0	0	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	0	0	0	0	-	2	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-
Blackgrass	0	6	0	0	2	0	4	0	0	0	5	0	8	0	0	0	2	2	3	6	2	9
Cocklebur	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	1	7	1	1	8	0	9	0	0	0	9	3	9	0	0	2	4	4	6	4	3	4
Ducksalad	0	0	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	1	8	1	0	9	0	9	0	0	0	8	1	9	0	0	0	7	3	7	7	8	7
Morningglory	1	6	2	4	9	0	8	0	7	4	1	4	3	4	2	5	1	1	2	2	10	8
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	2	0	0	0	0	3	0	0	0	-	-	0	0	0	2	0	0	0	0	2	5
Rice	0	0	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	0	0	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	1	0	0	2	0	6	0	0	1	2	1	4	2	2	2	1	1	1	1	2	4
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	2	0	0	0	0	3
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	456	457	458	459	460	461	462	463	465	466	467	468	469	470	471	472	473	474	476	477	478	479
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	3	0	0	2	0	4	2	0	1	0	5	5	3
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	-	6	-	-	-	-	-	4	-	-	6	-	-	-	-	8	-	-	-	0
Blackgrass	4	0	8	8	-	0	0	0	6	8	0	7	9	0	3	2	0	8	0	6	8	4
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Corn	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Crabgrass	4	0	8	5	9	0	0	2	5	9	0	9	9	0	8	8	3	6	0	5	8	6

Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	3	0	9	2	0	0	0	6	5	9	2	9	9	0	7	8	6	7	0	6	8	6
Morningglory	5	0	3	-	7	7	0	2	2	2	7	4	10	0	4	4	2	1	0	10	7	10
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	3	0	0	0	1	0	0	0	0	3	3	4	2	0	2	3	0	2	0	2	3	2
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	1	2	6	4	3	-	1	1	4	0	1	4	1	3	2	1	4	2	2	2	3
Sugarbeets	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	3	0	0	2	0	0	2	2	0	0	2	0	0	0
Wheat	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0
Wild oats	0	0	2	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	0	0

Table B

	COMPOUND																					
Rate 250 g/ha	480	481	482	483	485	486	487	488	489	490	492	493	494	495	496	497	498	499	500	501	504	505
Postemergence																						
B. signalgrass	5	6	0	0	4	1	0	6	6	4	0	0	0	0	0	0	0	0	7	7	8	8
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	-	0	-	2	4	6	4	5	-	-	-	-	-	0	-	-	-	9	-	-	-
Blackgrass	3	2	0	0	7	8	0	8	8	-	0	0	0	0	3	0	-	2	6	6	7	7
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	2	6	0
Corn	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	2	6
Crabgrass	7	2	1	0	7	5	5	8	8	6	0	0	-	0	0	0	0	0	8	9	9	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	8	0	0	8	8	4	9	9	8	0	0	0	0	0	0	2	0	8	9	9	9
Morningglory	7	2	8	0	10	2	10	8	10	3	8	0	0	2	8	0	3	4	3	3	4	5
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	2
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	7	7	2
Redroot pigweed	1	0	2	0	0	0	2	1	0	0	4	0	0	0	3	0	0	0	8	5	9	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	3	4	1	0	4	4	5	5	5	5	0	2	1	0	3	2	1	2	4	3	6	6
Sugarbeets	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	9	7	7	5
Velvetleaf	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	5	3	6	4
Wheat	0	0	0	0	1	1	0	3	0	0	0	0	0	0	0	0	0	0	3	2	5	4
Wild oats	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	2	3	7	3

Table B	COMPOUND																				
Rate 250 g/ha	506	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528
Postemergence																						
B. signalgrass	0	3	2	4	0	4	6	3	0	3	6	7	0	0	0	7	2	2	2	4	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	-	-	-	7	-	-	-	-	-	-	0	-	-	9	-	9	-	-	-	0
Blackgrass	5	6	6	5	0	6	8	5	0	7	6	7	0	0	7	8	3	9	8	9	4	0
Cocklebur	2	4	0	4	0	3	6	3	3	3	0	0	0	0	0	3	2	0	2	0	2	2
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	3	2	2	0	0
Crabgrass	7	9	9	8	7	5	6	9	9	-	8	10	6	4	10	8	6	8	9	9	9	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	4	8	8	8	5	7	8	9	9	8	9	2	4	4	9	-	4	8	9	7	8	3
Morningglory	3	4	2	5	4	6	6	7	6	6	2	8	0	4	3	4	4	2	2	6	5	5
Nutsedge	0	0	-	0	0	0	0	0	0	0	0	-	-	0	0	0	0	-	5	0	0	0
Rape	2	8	3	6	1	0	4	6	5	8	0	7	0	0	2	0	2	0	3	-	0	3
Redroot pigweed	0	7	0	8	7	8	6	6	5	8	4	0	0	-	0	4	3	0	9	2	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	5	5	7	4	5	8	7	7	7	6	5	4	4	5	-	5	3	5	3	4	5
Sugarbeets	6	8	4	6	-	2	6	4	3	7	2	3	0	0	0	6	0	0	6	0	0	0
Velvetleaf	2	1	5	6	2	1	5	5	5	4	0	4	4	4	2	7	3	5	3	7	3	4
Wheat	2	0	0	0	0	0	6	0	0	5	3	0	0	0	0	5	0	0	5	0	0	0
Wild oats	0	2	4	2	0	1	-	0	0	5	0	2	0	0	0	7	0	0	4	0	0	0

Table B	COMPOUND																				
Rate 250 g/ha	531	532	533	534	535	536	540	541	543	544	545	546	548	549	550	551	552	553	554	555	556	557
Postemergence																						
B. signalgrass	0	0	-	0	0	0	0	0	3	0	2	0	0	0	2	2	0	3	0	0	4	2
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	-	-	-	0	10	5	-	2	2	9	9	0	0	4	10	2	7	9	0	0
Blackgrass	0	0	-	7	7	0	2	0	0	0	0	3	3	2	2	7	0	3	7	2	3	0
Cocklebur	2	2	2	0	0	0	0	5	0	3	8	0	0	0	1	0	2	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	9	7	9	4	5	5	5	0	3	8	3	7	-	6	10	8	-	8	9	9	2	4
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	4	9	4	5	0	0	0	0	6	3	4	0	2	9	5	3	6	8	8	9	6
Morningglory	4	5	7	2	2	2	5	1	4	10	10	5	8	4	9	4	2	0	5	5	4	-

Nutsedge	0	-	0	2	0	0	0	0	0	0	-	-	0	-	0	-	0	0	0	0	0	0
Rape	0	2	-	0	0	0	7	3	0	2	0	7	7	5	-	7	4	7	0	-	0	0
Redroot pigweed	0	0	-	3	0	0	2	0	0	0	0	0	2	0	0	3	0	0	7	2	3	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	6	5	4	6	6	4	1	1	2	0	2	2	2	2	3	3	3	3	3	2	3	0
Sugarbeets	0	0	-	3	0	0	6	0	2	1	0	4	3	0	2	5	3	0	7	0	0	0
Velvetleaf	0	2	4	2	0	0	0	0	0	0	6	-	0	4	0	3	2	5	0	2	0	0
Wheat	0	0	-	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	2	0
Wild oats	0	0	-	0	0	0	0	0	0	0	0	0	0	0	4	0	0	2	2	0	2	0
Table B									COMPOUND													
Rate 250 g/ha	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579
Postemergence																						
B. signalgrass	0	9	6	6	5	5	3	0	8	0	7	0	0	0	0	0	0	0	0	0	0	2
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	0	-	4	-	-	-	-	0	-	-	-	-	0	-	-	-	5	-	-	10
Blackgrass	2	7	7	6	3	4	4	0	3	0	8	2	0	0	0	0	6	0	2	0	0	2
Cocklebur	0	0	0	0	2	0	0	2	2	0	1	2	0	0	0	2	2	0	0	0	0	0
Corn	0	6	2	0	7	4	0	0	2	0	4	0	0	0	0	0	0	0	2	0	0	0
Crabgrass	8	9	3	4	7	8	8	0	10	7	9	6	0	-	6	9	-	9	9	3	4	6
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	5	9	7	7	8	8	7	0	8	0	9	4	0	2	0	9	6	8	7	2	7	5
Morningglory	10	9	9	5	10	10	10	7	6	4	10	10	10	10	5	10	10	9	4	10	10	10
Nutsedge	0	2	3	-	5	0	0	0	-	-	0	0	0	0	0	0	0	0	0	-	-	0
Rape	0	2	4	4	0	5	2	0	9	0	2	0	0	0	3	3	0	3	0	0	4	0
Redroot pigweed	0	3	8	0	9	5	3	6	-	0	0	4	0	0	0	4	0	4	0	0	3	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	5	2	3	4	3	5	3	6	4	6	4	3	2	5	4	6	5	3	3	3	3
Sugarbeets	2	2	0	-	3	0	2	0	-	0	1	0	0	0	0	0	0	-	0	0	0	0
Velvetleaf	0	2	0	0	6	2	2	4	5	0	5	2	0	0	0	0	2	2	0	0	4	0
Wheat	0	2	3	3	7	0	-	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	4	2	2	0	0	-	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Table B									COMPOUND													
Rate 250 g/ha	580	581	582	584	585	586	587	588	589	590	591	592	593	594	595	596	598	599	600	601	602	603
Postemergence																						

	COMPOUND																					
B. signalgrass	5	7	0	7	0	3	0	4	0	0	0	0	0	2	6	0	0	0	0	4	5	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	-	9	9	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-
Blackgrass	7	4	3	7	6	3	3	6	2	0	0	0	0	5	9	0	0	0	0	7	8	0
Cocklebur	3	3	2	4	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Corn	0	5	0	3	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Crabgrass	9	7	3	6	9	8	-	6	1	0	0	0	0	9	9	0	0	0	-	5	4	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	8	9	9	8	8	0	8	0	0	0	0	0	7	9	0	0	0	0	7	9	0
Morningglory	8	7	10	5	10	10	6	10	5	3	2	2	0	2	3	0	0	1	0	1	2	2
Nutsedge	-	-	-	0	0	0	0	-	-	0	0	0	0	3	0	-	0	-	0	0	0	0
Rape	7	7	0	9	5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Redroot pigweed	5	8	7	2	3	0	0	0	2	0	0	0	0	3	3	0	0	0	0	2	3	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	4	3	3	4	3	6	4	3	3	2	1	0	-	4	2	0	2	3	5	5	2
Sugarbeets	5	7	3	5	4	0	0	0	0	0	0	0	0	5	3	0	0	0	0	0	0	0
Velvetleaf	2	6	0	3	4	0	0	0	5	2	0	0	0	3	7	0	0	0	0	0	0	0
Wheat	0	4	0	3	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Wild oats	3	5	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625
Postemergence																						
B. signalgrass	0	0	0	4	-	5	7	7	7	6	0	0	1	0	0	0	0	0	0	0	7	2
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	0	-	-	-	4	6	6	8	3	-	0	-	-	0	-	-	-	-	-	-
Blackgrass	0	0	0	6	8	8	9	9	9	9	0	0	0	0	0	0	0	0	0	4	8	7
Cockl bur	0	0	0	0	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2	0
Corn	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Crabgrass	3	1	3	8	7	9	9	9	9	9	5	4	4	2	0	0	-	-	-	0	7	4
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	3	0	0	7	7	9	9	9	9	9	2	6	3	4	0	0	0	1	6	0	8	5
Morningglory	2	9	10	8	8	10	8	8	8	8	2	1	4	0	0	1	2	2	2	8	1	1
Nutsedge	0	0	-	0	0	0	5	3	0	2	0	0	0	-	0	0	0	0	0	0	0	0
Rape	0	0	3	0	5	1	3	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	1	0	7	2	6	3	4	7	0	0	0	0	0	1	0	0	0	0	2	0

Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	3	2	6	4	-	8	8	7	6	4	3	4	3	6	1	1	5	6	0	7	3
Sugarbeets	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Velvetleaf	0	0	0	3	4	7	7	5	3	5	0	0	0	0	0	2	0	0	0	0	0	0
Wheat	0	1	0	2	0	2	4	2	2	2	0	0	0	0	0	0	0	0	0	1	0	0
Wild oats	0	1	0	0	5	0	5	4	6	9	-	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	627	628	629	630	631	632	633	634	635	636	638	639	640	641	642	643	644	645	646	647	648	649
Postemergence																						
B. signalgrass	7	8	3	1	6	2	0	0	2	0	6	0	0	0	0	0	0	0	0	7	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	8	-	-	0	0	0	9	9	-	-	-	-	-	-	-	0	0	-	-	-
Blackgrass	9	9	8	3	6	6	4	8	7	3	6	2	-	2	6	0	0	0	0	7	0	0
Cocklebur	0	6	0	0	0	0	0	2	3	3	2	2	2	0	0	0	0	3	0	4	0	0
Corn	7	7	4	2	6	3	0	0	0	2	2	0	0	0	0	0	0	0	0	5	0	0
Crabgrass	9	9	8	8	9	8	3	7	8	9	8	2	3	3	0	0	0	0	0	9	0	-
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	9	9	8	9	8	3	9	8	9	8	6	0	3	4	0	0	0	0	9	0	2
Morningglory	6	2	3	2	4	2	5	2	4	6	3	7	6	7	0	4	0	1	0	2	10	7
Nutsedge	6	-	0	-	0	0	0	-	-	0	-	-	0	4	0	0	-	0	0	-	0	0
Rape	0	3	0	0	2	0	0	0	7	7	0	0	0	0	0	0	0	0	0	2	0	0
Redroot pigweed	6	7	2	1	-	0	1	2	3	6	0	4	4	3	0	0	3	2	0	6	10	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	-	7	5	8	4	2	3	4	4	3	3	0	1	2	1	-	1	1	3	3	3
Sugarbeets	0	3	0	0	0	0	0	0	7	5	0	0	0	0	0	0	0	0	0	2	0	0
Velvetleaf	8	8	5	4	7	0	0	3	2	3	4	0	3	0	3	0	0	0	0	6	0	0
Wheat	6	7	0	0	6	0	0	0	2	0	3	0	0	0	0	0	0	0	0	6	0	0
Wild oats	6	5	-	0	1	0	0	0	5	0	1	1	0	1	1	1	0	0	0	2	0	0

Table B	COMPOUND																					
Rate 250 g/ha	650	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	670	671	672	674
Postemergence																						
B. signalgrass	0	0	0	0	2	5	4	0	5	0	2	0	0	4	1	5	6	4	7	6	3	8
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	-	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	0	4	0

Blackgrass	0	0	0	0	0	9	8	6	7	3	4	0	0	9	8	8	8	8	5	8	6	8
Cocklebur	0	0	0	0	0	0	4	2	0	2	0	0	0	2	0	4	4	2	2	0	2	2
Corn	2	0	0	0	0	0	1	0	4	0	0	0	0	0	0	0	4	3	5	0	0	6
Crabgrass	7	0	0	2	8	8	9	2	6	5	7	0	0	9	9	9	9	9	8	8	7	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	4	2	5	-	9	7	7	8	5	4	2	0	9	8	8	9	9	9	9	8	9
Morningglory	10	5	1	10	9	2	5	7	10	6	0	9	4	9	6	7	4	4	6	1	8	10
Nutsedge	2	-	0	0	0	0	7	-	-	0	0	0	0	0	0	0	0	0	5	-	0	7
Rape	0	0	-	0	2	0	3	0	0	0	0	0	0	3	3	0	-	-	4	0	2	1
Redroot pigweed	0	-	0	0	3	0	5	7	2	5	2	0	0	4	6	2	5	6	8	3	8	3
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	1	0	0	2	2	4	4	5	4	-	2	3	5	4	7	5	3	4	3	5	5
Sugarbe ts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	2	0
Velvetleaf	0	0	0	0	0	0	4	2	6	3	0	0	0	5	6	6	7	4	5	0	7	7
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
Wild oats	0	0	0	0	0	0	2	1	0	0	1	1	0	5	2	3	4	0	3	0	0	0
Table B									COMPOUND													
Rate 250 g/ha	675	676	677	678	679	680	681	708	709	710	711	712	713	714	722	736	739	740	741	743	744	745
Postemergence																						
B. signalgrass	8	7	0	0	0	0	0	0	0	6	6	4	5	6	2	0	2	0	4	3	5	6
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	6	-	-	0	0	0	0	-	-	6	8	-	-	-	-	-	4	-	4	4	-	7
Blackgrass	7	6	0	0	0	0	0	2	0	6	7	5	7	6	0	2	3	4	0	5	5	8
Cockl bur	3	0	0	0	0	0	0	0	0	0	2	3	3	2	0	0	2	3	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0
Crabgrass	9	-	0	0	0	1	0	0	6	9	9	9	9	9	2	3	-	9	9	7	8	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	8	2	1	0	0	0	4	8	9	9	8	9	7	4	2	9	8	3	8	8	9
Morningglory	2	2	4	6	0	1	0	2	2	4	4	10	7	2	10	6	6	3	5	2	2	3
Nutsedg	0	0	0	0	0	0	0	0	0	0	3	0	0	5	0	0	0	0	0	3	3	0
Rape	1	0	0	0	0	0	0	0	0	3	2	4	6	8	0	0	0	0	0	0	3	5
Redroot pigweed	8	3	3	0	0	0	2	0	8	9	9	6	9	9	8	-	3	4	7	5	0	5
Ric	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soyb an	5	3	1	2	1	0	0	4	3	4	5	5	5	4	0	4	4	4	3	4	4	5

Sugarbeets	2	0	0	0	0	0	0	0	0	3	2	-	0	7	0	0	3	2	4	4	0	4
Velvetleaf	4	3	0	0	0	0	0	3	4	6	6	6	6	2	0	2	0	2	0	0	0	3
Wheat	4	2	0	0	0	0	0	0	0	4	3	0	2	3	2	2	2	0	0	3	5	0
Wild oats	5	0	0	0	0	0	0	0	0	5	2	0	1	4	2	3	0	0	3	0	0	4

Table B									COMPOUND													
Rate 250 g/ha	746	747	748	749	750	751	752	753	754	756	757	758	759	760	761	762	763	764	765	766	767	772
Postemergence																						
B. signalgrass	6	4	4	3	6	6	2	2	6	0	0	6	6	0	3	2	5	2	7	8	6	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	8	-	9	3	7	-	2	-	0	3	0	7	-	-	0	0	-	-	-	0	7	0
Blackgrass	8	8	7	6	7	6	6	4	5	0	3	6	7	0	0	0	5	6	7	6	9	0
Cocklebur	2	2	0	4	1	2	-	0	0	0	2	4	1	0	0	0	1	2	0	2	2	0
Corn	4	4	0	0	0	0	0	0	2	0	0	0	0	1	0	2	0	0	0	4	0	0
Crabgrass	9	9	8	9	9	9	8	6	9	0	6	8	8	9	0	3	8	9	7	6	9	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	9	8	9	8	9	9	8	8	0	5	9	8	7	-	8	9	8	9	9	9	0
Morningglory	10	10	6	5	8	8	8	9	10	10	7	4	3	3	7	2	7	2	6	2	5	0
Nutsedge	2	0	0	0	7	0	0	2	-	0	0	0	0	0	0	0	3	0	0	-	0	0
Rape	7	4	6	6	6	5	4	0	0	0	0	0	0	2	0	0	0	3	0	0	-	0
Redroot pigweed	8	7	6	4	7	9	5	6	0	0	5	8	0	2	6	6	3	7	-	6	9	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	7	4	5	7	7	6	4	2	2	4	5	3	4	3	4	3	3	5	4	4	0
Sugarbeets	4	0	6	4	3	3	3	5	0	0	3	3	0	0	3	6	2	3	0	2	5	0
Velvetleaf	6	4	0	3	5	2	2	2	0	0	3	6	6	0	0	3	0	4	7	3	2	0
Wheat	-	4	0	0	2	5	5	0	5	0	0	5	0	0	0	0	4	7	3	3	2	0
Wild oats	6	2	0	0	0	3	0	0	0	0	0	1	2	0	0	0	-	2	0	2	0	0

Table B			COMPOUND							
Rate 250 g/ha	773	774	775	776	777	778	780	790	791	792
Postemergence										
B. signalgrass	0	0	3	0	2	6	5	7	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	2	3	2	3	-	0	3	-
Blackgrass	0	0	4	2	2	4	4	5	5	-
Cocklebur	0	0	0	0	0	0	0	0	0	3
Corn	0	0	0	0	0	0	3	4	1	2

Crabgrass	0	0	7	2	7	8	7	9	9	-
Ducksalad	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	7	2	8	9	9	8	8	9
Morningglory	0	0	6	-	8	4	7	7	9	10
Nutsedge	0	0	0	0	0	-	4	5	0	0
Rape	0	0	0	2	0	2	0	3	5	7
Redroot pigweed	0	0	3	2	4	4	0	5	6	6
Rice	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-
Soybean	0	0	6	2	3	4	0	4	5	5
Sugarbeets	0	0	0	3	3	0	0	0	2	2
Velvetleaf	0	0	2	3	3	3	4	5	6	6
Wheat	0	0	0	0	2	2	0	4	0	1
Wild oats	0	0	0	0	2	2	2	0	0	2

Table B	COMPOUND																												
Rate 250 g/ha	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Preemergence																													
B. signalgrass	0	0	0	8	3	0	0	4	0	8	0	0	2	0	0	0	6	7	2	0	0	4	0	4	7	2	0	0	0
Bedstraw	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0	0	0	0	0	1	0
Blackgrass	0	0	0	8	3	0	0	0	0	8	0	0	0	0	0	0	3	5	2	1	0	6	2	4	8	0	0	3	2
Cocklebur	0	0	0	0	0	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	0	0	-	0	0	0	0	0	0
Corn	0	6	0	0	0	1	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Crabgrass	8	0	0	10	3	-	-	-	0	-	0	0	5	9	-	2	9	8	7	6	7	8	3	9	10	3	0	9	7
Giant foxtail	8	7	1	10	8	4	5	9	0	9	0	0	8	9	-	3	7	8	4	7	8	7	3	9	10	4	0	7	3
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Nutsedge	-	-	-	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	8	7	5	0	5	0	0	0	0	0	0	0	0	10	8	2	4	6	5	0	6	8	0	0	1	5
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	8	0	0	0	0	0	0	0	0	0	0	3	0	3	2	1	2	3	7	0	4	0	0	0	0	0
Velvetleaf	0	0	0	0	0	2	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	4	6	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	6	0	0	3	0

Table B	COMPOUND																												
Rate 250 g/ha	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	51	52	53	54	55	56	57	58	59
Preemergence																													

B. signalgrass	4	6	2	7	2	3	8	0	8	0	5	4	0	0	0	4	2	0	0	0	0	0	2	0	0	0	0	0	0
Bedstraw	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	7	2	4	0	6	2	6	0	10	0	1	2	0	0	0	0	2	0	2	0	0	3	1	0	0	0	0	0	0
Cocklebur	-	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	10	9	9	7	10	6	9	3	10	5	7	8	0	0	0	1	10	2	7	9	2	6	7	3	0	0	0	0	0
Giant foxtail	10	8	9	9	10	10	10	2	10	-	10	10	0	0	0	10	10	3	10	10	4	7	8	3	0	0	0	0	3
Morningglory	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	4	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	7	3	0	0	6	0	6	0	10	6	4	1	0	0	0	8	6	0	0	0	0	1	0	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	8	4	2	2	2	2	6	0	6	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Table B											COMPOUND																		
Rate 250 g/ha	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	85	86	87	88	89
Preemergence																													
B. signalgrass	0	5	0	0	0	0	0	0	4	0	0	0	0	0	0	2	2	0	5	3	0	3	0	0	0	4	4	2	0
Bedstraw	0	2	0	0	0	2	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	5	2	0	0	0	0	2	2	0	0	0	0	0	0	7	4	0	4	6	4	6	0	0	0	5	5	4	0
Cocklebur	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	1	7	6	1	2	4	4	4	10	2	0	0	0	8	5	10	8	2	9	9	10	8	0	0	0	10	10	10	0
Giant foxtail	4	9	9	2	3	4	6	8	10	4	0	0	2	9	8	9	9	3	9	9	8	8	0	0	0	10	10	10	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	2	-	0	10	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	5	0	4	0	0	0	0	0	0	0	0
Redroot pigweed	0	1	0	0	0	0	0	9	7	0	0	0	0	0	0	7	3	0	6	7	7	0	0	0	0	8	8	10	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	3	5	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	1	4	0	0	0	0	3	3	6	0
Velvetleaf	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	3	3	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	8	4	0	6	3	3	3	0	0	0	4	4	2	0
Table B											COMPOUND																		

Rate 250 g/ha	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113
Preemergence																								
B. signalgrass	-	10	10	-	1	3	1	3	0	2	0	0	0	7	5	5	0	10	7	10	-	1	3	10
Bedstraw	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	10	8	10	5	0	0	7
Blackgrass	3	10	10	10	8	4	3	1	8	4	0	0	2	3	6	8	0	10	9	10	7	2	2	10
Cocklebur	0	-	0	-	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	3
Corn	0	8	5	8	3	0	0	0	0	0	0	0	0	0	0	2	0	9	6	7	4	4	0	8
Crabgrass	8	10	8	9	6	8	7	1	8	10	0	0	0	9	1	8	8	10	9	10	9	9	10	10
Giant foxtail	9	10	10	10	9	7	3	4	10	10	0	0	9	9	10	10	10	10	10	10	10	10	10	10
Morningglory	0	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	6	0	0	2	7
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Rape	0	10	10	8	2	3	0	5	0	0	0	0	0	0	0	4	0	9	7	9	4	4	0	10
Redroot pigweed	0	10	9	10	0	9	7	4	5	4	0	0	0	6	0	9	0	10	10	10	7	8	7	10
Soybean	0	4	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	8	5	4	0	9
Sugarbeets	0	9	8	8	0	2	0	5	3	2	0	0	0	0	1	4	0	10	4	10	2	3	0	9
Velvetl af	0	7	6	6	0	0	0	0	2	0	0	0	0	3	0	5	0	10	4	10	5	3	4	8
Wheat	0	4	7	6	0	0	0	0	1	2	0	0	0	0	0	0	0	7	2	9	0	0	0	7
Wild oats	2	10	9	10	4	2	2	2	2	3	0	0	0	3	4	3	0	10	9	10	5	2	2	10

Table B

COMPOUND

Rate 250 g/ha	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
Preem rgence																						
B. signalgrass	7	4	10	9	3	7	6	8	0	0	0	0	0	0	0	-	9	8	7	5	6	3
Bedstraw	0	0	9	0	0	2	0	2	0	0	0	0	0	0	0	0	2	10	9	0	0	0
Blackgrass	10	0	10	10	3	9	7	7	0	4	0	-	0	0	0	2	9	10	9	3	2	0
Cocklebur	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	2	-	0	0	0
Corn	7	0	6	7	0	0	0	0	0	0	0	0	0	0	0	2	6	9	7	0	0	0
Crabgrass	9	7	10	10	10	8	9	8	8	5	0	0	0	0	0	7	9	9	9	5	9	0
Giant foxtail	10	9	10	10	10	10	9	8	9	9	0	-	0	2	0	8	10	10	9	9	10	0
Morningglory	0	0	4	2	0	2	0	0	0	0	0	0	0	0	0	0	3	5	0	0	0	0
Nutsedge	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	6	0	10	10	0	7	0	0	0	0	0	0	0	0	0	0	10	10	0	0	0	0
Redroot pigweed	10	6	10	10	2	10	8	8	8	5	0	0	0	3	0	2	10	10	7	0	0	4
Soybean	0	0	9	8	0	0	0	0	0	0	0	0	0	0	0	0	3	8	2	0	0	0
Sugarbeets	7	0	10	9	0	8	4	7	0	5	0	0	0	0	0	3	10	10	6	3	4	0
Velvetleaf	5	2	10	10	0	5	0	0	0	3	0	0	0	0	0	4	8	9	6	2	2	0
Wheat	2	0	8	7	0	3	2	0	0	5	0	0	0	0	0	3	-	8	2	0	0	0

Wild oats	9	0	10	10	6	6	6	5	3	6	0	0	0	0	0	6	10	10	8	2	2	0

Tabl B	COMPOUND																					
Rate 250 g/ha	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157
Preemergence																						
B. signalgrass	5	7	6	8	0	0	0	2	5	3	10	8	7	0	0	5	4	0	0	0	2	0
Bedstraw	0	7	10	2	0	0	0	0	0	0	10	2	0	0	0	0	0	0	0	0	0	0
Blackgrass	4	9	9	9	4	0	0	5	4	4	10	10	7	0	0	10	0	0	3	2	3	5
Cocklebur	0	0	0	0	0	0	0	-	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Corn	0	0	8	4	0	0	0	0	2	0	8	8	0	0	0	5	0	0	0	0	0	0
Crabgrass	7	10	10	10	8	3	2	8	7	4	9	8	9	0	5	10	1	0	0	6	6	4
Giant foxtail	10	10	10	10	-	3	5	9	8	5	10	9	9	0	3	10	3	0	-	2	7	8
Morningglory	0	0	3	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	10	10	4	0	0	0	4	0	0	10	8	6	0	0	10	0	0	0	0	0	0
Redroot pigweed	10	10	10	10	0	0	0	4	0	2	10	9	9	0	8	10	0	0	8	3	9	0
Soybean	0	3	5	0	0	0	0	0	0	0	2	9	0	0	0	3	0	0	0	0	0	0
Sugarbeets	8	10	10	4	0	0	0	3	2	0	10	6	8	0	0	10	0	0	4	0	0	0
Velvetleaf	0	7	10	5	0	0	0	0	0	0	8	6	8	0	0	10	0	0	0	0	0	0
Wheat	0	5	6	2	0	0	0	0	0	0	8	7	3	0	0	4	0	0	0	0	0	0
Wild oats	0	9	-	8	1	0	0	5	2	0	10	9	6	0	0	10	0	0	4	0	0	0

Table B	COMPOUND																					
Rate 250 g/ha	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179
Preemergence																						
B. signalgrass	0	0	0	5	3	2	0	6	0	5	2	7	10	3	5	3	0	0	0	0	8	-
Bedstraw	0	0	0	0	0	4	0	3	0	3	0	7	6	0	3	0	-	9	0	9	0	0
Blackgrass	-	0	0	7	2	10	0	6	4	3	2	8	10	0	3	0	2	0	2	6	0	2
Cocklebur	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	2	0	0	0	0	0	0	0	0	0	0	3	6	0	0	0	0	0	0	0	0	0
Crabgrass	4	0	0	9	9	8	0	8	7	10	7	10	10	10	10	8	8	6	9	9	8	9
Giant foxtail	7	0	0	9	9	8	0	8	5	10	10	10	10	10	10	9	10	8	10	10	8	10
Morningglory	1	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
Nuts dge	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	-	3	0	0	0	0
Rap	0	0	0	0	4	7	0	4	0	0	0	6	10	-	0	0	0	0	0	0	0	2
Redroot pigweed	0	0	0	4	0	6	0	0	0	8	0	8	10	5	8	0	8	0	0	0	6	7
Soybean	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	4	0	4	0	5	4	7	8	0	5	3	6	0	0	0	0	0

Velvetleaf	0	0	0	0	0	5	0	4	5	0	0	6	10	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	2	0	0	0	0	0	3	8	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	3	2	7	0	4	0	3	1	8	10	4	3	2	0	0	3	0	0	0

Table B									COMPOUND													
Rat 250 g/ha	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201
Pr emergence																						
B. signalgrass	0	0	0	4	8	0	0	0	6	3	0	0	6	0	0	1	0	0	0	6	0	0
Bedstraw	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	0	0	0	5	0	3	0	0	4	0	4	6	0	3	3	0	0	0	10	7	4
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	7	7	6	0	0	0	0	8	7	6	9	5	0	0	0	10	6	9
Giant foxtail	0	0	0	0	10	9	9	0	4	3	0	9	10	5	8	8	0	0	0	10	6	8
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	-	0	0	0	0	-	-
Rape	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	2	0	0	0	0	1	5	0	8	0	0	0	0	10	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	5	0	0
Velvetleaf	0	0	0	0	2	0	2	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	3	0	3	5	0	3	0	0	0	0	4	0	3

Table B									COMPOUND													
Rate 250 g/ha	202	203	204	205	206	207	208	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224
Preemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	5	0	0	2	4	0	6	9	8	6	0	3	4
Bedstraw	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	10	4	0	0	0
Blackgrass	5	0	2	0	0	4	0	0	9	7	0	3	-	4	8	9	10	10	7	0	4	3
Cocklebur	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0
Crabgrass	6	0	8	1	3	3	6	3	3	5	3	1	4	8	8	6	9	8	8	8	7	9
Giant foxtail	7	0	10	0	8	9	9	3	7	9	4	6	3	7	10	10	10	10	10	7	-	9
Morningglory	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	1	0
Nutsedge	-	0	0	0	0	0	0	0	-	0	-	-	0	0	0	-	-	-	0	0	-	-
Rap	0	0	0	0	0	0	0	0	0	6	0	0	0	0	4	0	6	8	8	0	0	0
Redroot pigweed	8	0	0	0	0	2	0	2	3	10	5	6	5	2	10	8	9	8	10	0	7	0

Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Sugarbeets	3	0	0	0	0	0	0	0	0	5	0	0	2	0	0	6	4	8	10	0	0	0
Velvetleaf	6	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	7	4	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	5	0	0	0	0	8	0	8	8	2	0	0	0
Wild oats	0	0	3	0	0	0	0	2	5	3	0	0	2	0	2	7	8	7	4	0	2	0

Table B								COMPOUND														
Rate 250 g/ha	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246
Pr emergence																						
B. signalgrass	7	9	0	0	0	0	0	1	4	0	0	0	0	0	4	0	4	9	7	0	8	3
Bedstraw	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	7	9	5	0	9	0
Blackgrass	10	10	10	0	0	0	0	8	8	0	0	5	0	0	4	0	7	10	10	0	10	6
Cocklebur	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
Corn	4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	7	0
Crabgrass	10	10	10	1	0	7	0	9	9	0	0	5	2	10	10	9	10	10	9	0	9	10
Giant foxtail	10	10	10	9	0	8	3	8	9	0	0	9	4	10	10	10	10	10	10	0	10	10
Morningglory	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	8	0	6	0
Nutsedge	8	-	0	0	0	0	0	-	0	-	-	-	-	0	-	0	10	10	0	0	-	0
Rape	0	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	5	10	9	0	10	10
Redroot pigweed	10	7	10	0	0	0	0	5	7	0	0	0	0	0	0	0	9	10	10	0	10	0
Soybean	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	8	0	2	0
Sugarbe ts	5	5	6	0	0	0	0	4	4	0	0	0	0	3	0	0	6	-	7	0	10	2
Velvetleaf	6	6	0	0	0	0	0	0	2	0	0	0	0	0	2	0	5	8	10	0	10	4
Wheat	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	8	0	7	0
Wild oats	10	9	3	0	0	0	0	3	2	0	0	0	0	0	3	0	8	9	9	0	10	6

Table B								COMPOUND														
Rate 250 g/ha	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268
Preemergence																						
B. signalgrass	0	0	0	0	7	0	0	0	3	0	0	7	8	0	0	0	0	5	0	0	0	0
Bedstraw	0	0	0	0	10	0	0	0	0	0	0	3	10	-	-	0	0	0	0	8	0	0
Blackgrass	0	0	0	0	9	4	0	0	10	0	0	8	10	2	1	2	0	4	0	9	2	0
Cocklebur	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	2	0
Crabgrass	2	0	0	8	9	4	0	0	7	2	2	9	-	6	5	2	0	3	2	5	1	0
Giant foxtail	2	0	3	10	10	10	0	6	10	9	6	10	9	8	9	-	9	7	8	6	9	0
Morningglory	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	-	-	-	-	0	-	0	0	-	0	0	0	0	0	0	0	0	0	0

Rape	0	0	0	0	9	3	0	2	0	0	0	5	-	0	0	0	0	0	0	5	0	0
Redroot pigweed	0	0	0	3	10	0	0	0	5	0	0	7	2	4	0	0	0	0	0	6	6	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	0	0	0
Sugarbeets	0	0	0	5	10	3	0	2	6	0	0	5	0	0	0	0	0	1	0	7	0	0
Velvetleaf	0	0	0	0	5	2	0	0	5	0	0	5	4	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	2	0	0	4	0	0	4	0	0	0	0	0	2	0	4	0	0
Wild oats	0	0	0	0	8	3	0	0	5	0	0	5	4	0	0	0	0	5	2	5	0	0

Table B									COMPOUND													
Rate 250 g/ha	269	270	271	272	273	274	276	277	278	279	280	281	282	283	284	285	286	288	289	292	293	294
Preemergence																						
B. signalgrass	6	0	8	0	2	0	10	10	0	0	0	0	2	10	5	10	8	6	8	0	7	7
Bedstraw	0	0	10	0	0	0	0	0	0	0	0	6	2	1	8	8	0	10	7	0	0	0
Blackgrass	3	0	10	0	-	0	10	10	0	0	0	2	4	9	8	5	7	6	9	0	9	6
Cocklebur	0	0	0	0	0	0	0	0	0	-	0	0	-	0	-	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	9	0
Crabgrass	3	0	7	0	6	1	6	9	2	0	0	10	6	-	8	8	10	10	4	0	8	9
Giant foxtail	10	0	10	6	8	6	10	10	2	6	0	10	10	10	9	10	10	10	10	0	9	10
Morningglory	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Nutsedge	-	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Rape	0	0	10	0	0	0	1	1	0	0	0	0	7	2	7	3	3	0	10	0	8	0
Redroot pigweed	4	0	10	0	0	0	2	0	0	0	0	0	7	10	7	5	2	0	8	0	10	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Sugarbeets	0	0	8	0	6	0	1	2	0	0	0	0	0	2	6	0	0	0	8	0	4	0
Velvetleaf	0	0	7	0	0	0	0	6	0	0	0	0	0	5	0	3	3	3	7	0	7	3
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	2	0	8	0
Wild oats	2	0	6	0	0	0	4	7	0	0	0	2	5	4	3	3	4	5	8	0	8	3

Table B									COMPOUND													
Rate 250 g/ha	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316
Preemergence																						
B. signalgrass	8	0	0	0	9	0	0	0	0	0	0	0	0	0	0	7	0	0	0	6	3	9
Bedstraw	0	0	0	-	10	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	-	3
Blackgrass	10	0	0	0	10	0	0	2	0	0	0	0	2	0	2	10	0	0	0	10	7	10
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	-	0
Corn	0	0	0	0	8	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Crabgrass	7	0	7	0	9	4	0	2	0	6	6	0	0	0	2	7	0	0	0	7	7	8
Giant foxtail	10	0	7	-	10	9	0	7	0	6	9	8	9	0	9	10	0	0	0	7	9	10

Morningglory	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0
Nutsedge	0	-	0	0	-	0	0	0	0	0	0	0	0	0	0	10	0	0	0	-	-	-
Rape	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	10	0	0	0	3	0	4
Redroot pigweed	6	0	0	0	10	0	0	0	0	0	3	0	0	0	0	10	0	0	0	2	0	10
Soybean	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Sugarbe ts	3	0	0	0	9	0	0	2	0	6	0	0	0	0	0	10	0	0	0	2	1	0
Velvetleaf	3	0	0	0	8	0	0	0	0	0	0	0	0	0	0	7	0	0	0	3	0	3
Wheat	6	0	0	0	8	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	2	2
Wild oats	9	0	0	0	8	0	0	2	0	0	0	0	0	0	0	9	0	0	0	2	0	6

Table B									COMPOUND													
Rate 250 g/ha	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338
Preemergence																						
B. signalgrass	7	0	2	2	3	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0
Bedstraw	-	0	0	-	-	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	0
Blackgrass	8	0	2	5	6	5	0	0	2	7	4	4	0	0	0	0	0	0	0	0	2	0
Cockl bur	-	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	8	0	2	3	3	5	0	0	1	3	3	3	0	0	0	3	0	0	2	0	0	0
Giant foxtail	10	0	9	6	9	9	0	0	8	8	9	8	0	0	0	4	0	0	10	0	2	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	-	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	8	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0
Redroot pigweed	7	0	0	0	0	8	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarb ets	7	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	7	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0
Wild oats	8	0	0	0	2	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 250 g/ha	339	340	341	342	343	344	345	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362
Preemergence																						
B. signalgrass	0	1	0	2	6	0	0	5	-	2	2	7	5	5	3	5	6	5	0	7	4	7
Bedstraw	0	-	-	0	-	-	0	-	-	10	9	-	-	0	0	-	10	10	0	-	0	10
Blackgrass	2	3	6	3	9	0	0	9	4	8	3	10	7	8	5	9	9	10	0	9	10	10
Cocklebur	0	0	0	-	0	0	0	0	-	0	0	0	-	0	0	0	0	0	-	-	0	0
Corn	0	0	0	0	0	0	0	2	0	0	3	6	3	3	3	2	6	2	0	4	1	9

Crabgrass	2	8	2	9	-	0	0	10	8	10	10	10	10	9	10	9	9	10	0	10	7	8
Giant foxtail	9	10	10	10	10	3	0	10	10	10	10	10	10	10	10	10	10	10	0	10	10	10
Morningglory	0	0	0	0	-	0	0	0	0	0	0	0	1	0	0	0	2	3	0	7	0	6
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Rape	0	0	0	0	4	0	0	2	0	7	6	0	1	5	0	4	8	4	0	0	5	6
Redroot pigweed	0	3	0	0	10	0	0	10	2	10	10	10	10	10	10	8	10	10	0	10	8	10
Soybean	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Sugarbeets	0	0	0	0	1	0	0	3	4	4	6	3	2	2	2	2	5	3	0	6	6	8
Velvetleaf	0	0	0	0	7	0	0	7	3	4	4	6	4	6	3	3	5	5	0	7	4	6
Wheat	0	0	0	0	0	0	0	0	0	2	0	2	2	0	0	0	9	1	0	7	2	8
Wild oats	0	2	0	0	9	0	0	8	3	5	2	9	4	6	0	10	10	9	0	10	8	10

Table B									COMPOUND													
Rate 250 g/ha	363	364	365	367	368	369	370	371	372	373	374	375	376	378	379	380	381	382	383	384	385	387
Preemergence																						
B. signalgrass	5	0	0	4	8	2	2	2	6	0	2	4	0	0	0	0	0	2	0	3	7	1
Bedstraw	10	0	0	10	10	-	3	-	10	-	0	10	-	0	0	-	0	-	-	-	-	-
Blackgrass	10	1	0	8	10	2	9	10	10	5	5	9	0	0	0	0	0	3	2	3	6	0
Cocklebur	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	3	0	0	2	7	0	4	2	9	3	0	2	0	0	0	0	0	0	0	-	0	0
Crabgrass	7	2	0	10	10	9	9	10	10	10	9	10	0	9	7	7	3	9	9	9	9	8
Giant foxtail	10	9	0	10	10	10	10	10	10	10	10	10	0	10	6	9	5	9	10	10	10	9
Morningglory	5	0	0	0	3	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	10	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	3	0	0	5	6	2	6	9	10	0	2	6	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	7	0	0	10	10	10	10	10	10	7	0	10	0	0	0	3	0	0	0	0	7	6
Soybean	0	0	0	0	7	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	7	0	0	7	10	2	5	6	10	4	0	4	0	0	0	0	0	0	0	0	2	1
Velvetleaf	6	0	0	5	10	0	5	5	6	0	0	4	0	0	0	0	0	0	0	1	3	0
Wheat	6	0	0	0	8	0	2	2	0	0	0	2	0	0	0	0	0	0	0	2	3	0
Wild oats	10	0	0	3	10	0	2	3	9	0	0	9	0	0	0	0	0	0	0	6	7	3

Table B									COMPOUND													
Rate 250 g/ha	388	389	390	391	392	393	394	395	396	397	398	400	401	402	403	404	405	406	407	408	409	410
Preemergence																						
B. signalgrass	3	0	9	0	9	0	8	0	3	9	6	2	0	4	5	8	0	0	0	4	7	7
Bedstraw	-	-	-	-	10	-	-	0	-	-	-	-	-	-	-	10	-	0	0	-	-	-
Blackgrass	5	6	9	0	10	0	10	0	3	10	8	0	0	9	7	9	0	0	0	9	10	8

Cocklebur	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
Corn	-	0	-	0	9	0	3	0	0	3	0	2	0	3	2	2	0	0	0	4	8	4
Crabgrass	10	9	10	0	10	3	10	0	10	10	10	10	8	10	10	10	8	2	5	10	10	10
Giant foxtail	10	10	10	0	10	10	10	0	10	10	10	10	7	10	10	10	9	2	9	10	10	10
Morningglory	0	0	6	0	0	0	0	0	0	0	0	0	0	2	0	4	0	0	0	0	5	0
Nutsedge	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
Rape	2	0	8	0	5	0	7	0	0	10	8	0	0	5	5	7	0	0	0	6	4	2
Redroot pigweed	6	4	10	0	10	2	6	0	4	10	10	6	0	4	9	10	0	0	0	10	8	2
Soybean	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Sugarb ets	3	0	8	0	7	2	4	0	0	7	4	2	0	3	3	6	0	0	0	8	8	0
Velvetleaf	2	0	6	0	5	0	7	0	0	6	6	0	0	3	3	5	0	0	0	7	6	6
Wheat	4	0	8	0	8	0	6	0	0	2	0	0	0	3	0	4	0	0	0	4	9	7
Wild oats	10	1	10	0	10	0	10	0	2	7	3	0	0	8	5	10	0	0	0	5	7	7

Table B									COMPOUND													
Rat 250 g/ha	411	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434
Preemergence																						
B. signalgrass	7	1	6	7	7	6	2	6	9	0	0	0	8	6	3	0	0	3	0	0	2	0
Bedstraw	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	9	3	9	10	7	7	0	8	10	0	0	0	9	9	4	0	0	7	0	0	3	0
Cocklebur	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	2	0
Corn	8	0	3	3	0	2	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	10	9	9	10	9	10	4	9	9	0	-	0	10	10	9	9	10	10	-	8	10	0
Giant foxtail	10	10	10	10	10	10	2	10	10	0	3	0	10	10	10	8	10	10	2	6	10	0
Morningglory	2	0	0	6	0	0	1	2	7	0	0	0	2	0	0	0	0	0	0	0	2	0
Nutsedge	0	0	0	3	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Rape	9	0	10	9	5	0	2	0	10	0	0	0	2	8	0	0	0	0	0	0	3	0
Redroot pigweed	10	0	6	10	4	8	6	2	10	0	0	0	3	8	0	0	0	2	0	0	7	0
Soybean	0	0	0	7	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	8	0	6	7	2	2	3	2	10	0	0	0	2	4	0	0	0	0	0	0	4	0
Velvetleaf	6	0	6	6	2	5	1	6	10	0	0	0	2	2	0	0	0	4	0	0	4	0
Wheat	7	0	2	7	0	0	0	2	7	0	0	0	3	2	0	0	0	0	0	0	0	0
Wild oats	8	2	6	8	2	0	0	2	10	0	0	0	4	8	2	0	0	3	2	0	6	0

Table B									COMPOUND													
Rate 250 g/ha	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456
Preemergence																						
B. signalgrass	0	0	0	0	0	8	0	0	0	1	2	7	0	0	0	3	0	0	6	4	9	0

Bedstraw	-	-	-	0	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-
Blackgrass	0	0	0	2	0	10	0	0	0	8	0	8	0	0	0	4	0	2	3	2	6	3
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0
Crabgrass	6	0	0	9	0	10	0	8	9	9	3	9	8	4	9	8	1	5	6	8	10	8
Giant foxtail	3	0	0	10	0	10	0	3	10	10	5	10	7	3	8	9	4	4	10	10	10	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0
Rape	0	0	0	0	0	3	0	0	0	0	0	8	0	0	0	0	0	0	0	0	8	0
Redroot pigweed	4	0	0	5	0	7	0	0	0	10	4	10	0	0	0	7	0	0	6	9	10	3
Soybean	0	0	0	0	0	0	0	0	0	2	-	2	0	0	0	3	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	4	0	0	0	0	0	6	0	0	0	0	0	0	2	0	3	2
Velvetleaf	1	0	0	5	0	0	0	0	0	0	2	7	0	0	0	0	0	0	2	5	5	1
Wheat	0	0	0	0	0	5	0	0	0	0	0	3	0	0	0	0	0	0	3	0	0	0
Wild oats	2	0	0	1	0	9	0	0	0	0	0	8	2	0	0	0	0	0	2	0	9	2

Table B									COMPOUND													
Rate 250 g/ha	457	458	459	460	461	462	463	465	466	467	468	469	470	471	472	473	474	476	477	478	479	480
Preemergence																						
B. signalgrass	0	4	1	0	0	0	0	3	6	0	3	7	4	10	9	0	7	0	4	9	6	7
Bedstraw	0	-	-	-	0	0	-	-	-	0	-	-	-	-	-	-	-	-	-	8	0	-
Blackgrass	0	8	5	0	0	0	2	6	7	2	5	9	7	10	10	0	4	0	7	10	8	8
Cocklebur	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	-	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	8	0	2	2	0	0	0	0	0	0	0
Crabgrass	0	9	9	6	0	0	2	4	10	6	9	10	8	10	10	4	9	0	10	10	9	8
Giant foxtail	0	10	10	8	0	0	3	10	10	9	9	10	0	10	10	4	10	0	9	10	10	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	3	0	0	0	0	0	2	0	7	3	10	0	7	0	0	2	0	0	4	1	0
Redroot pigweed	0	6	4	0	0	0	10	9	9	7	8	10	0	10	10	10	5	2	6	9	6	8
Soybean	0	0	0	0	0	0	0	7	2	0	0	0	0	0	0	0	0	0	3	0	0	0
Sugarbeets	0	2	0	0	0	0	0	3	2	1	2	8	0	2	3	0	0	0	0	3	2	0
Velvetleaf	0	2	0	0	0	0	0	7	4	0	1	6	0	3	3	0	0	0	0	3	1	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	3	0
Wild oats	0	3	0	0	0	0	0	2	3	0	3	10	0	7	8	0	4	0	5	9	5	4
Table B									COMPOUND													
Rate 250 g/ha	481	482	483	485	486	487	488	489	490	492	493	494	495	496	497	498	499	500	501	502	503	504

Preemergence																						
B. signalgrass	9	0	0	8	6	3	7	8	6	0	0	0	0	1	0	0	0	9	9	10	8	10
Bedstraw	-	-	0	-	-	-	-	-	-	0	0	0	-	-	0	-	0	9	10	10	6	8
Blackgrass	10	0	0	8	10	7	8	9	9	0	0	0	0	2	0	0	0	10	9	10	9	10
Cocklebur	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Corn	0	0	0	0	5	0	0	0	3	0	0	0	0	0	0	0	0	-	7	9	8	5
Crabgrass	8	8	0	10	10	10	10	10	9	3	2	0	0	9	0	3	8	9	9	10	8	9
Giant foxtail	9	8	0	10	10	10	10	10	9	2	9	0	0	9	0	-	9	10	10	10	9	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	5	4	6	1
Nutsedge	6	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	7	9	6	2	7
Rape	0	0	0	0	6	0	8	4	6	0	0	0	0	0	0	0	0	10	3	6	9	10
Redroot pigweed	3	0	0	-	9	8	10	4	8	0	0	0	0	2	0	0	0	10	10	10	10	10
Soybean	0	0	0	0	0	-	1	2	0	0	0	1	0	0	0	0	0	6	3	4	6	1
Sugarbeets	2	0	0	0	4	0	7	4	3	0	0	0	0	0	0	0	0	10	6	5	7	8
Velvetleaf	0	0	0	0	0	0	6	6	2	0	0	0	0	0	0	0	0	10	4	5	7	6
Wheat	2	0	0	3	0	0	0	0	4	0	0	0	0	0	0	0	0	8	7	7	6	6
Wild oats	8	0	0	6	5	3	8	9	7	0	0	0	0	0	0	0	0	9	9	10	10	10

Table B	COMPOUND																					
Rate 250 g/ha	505	506	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527
Preemergence																						
B. signalgrass	2	0	8	8	8	0	10	5	8	8	9	0	10	0	0	0	9	9	2	-	9	4
Bedstraw	8	0	0	10	0	0	0	0	0	0	1	0	0	0	0	0	10	0	-	0	7	-
Blackgrass	7	4	5	8	7	0	9	4	5	5	8	4	7	4	0	0	9	7	4	-	10	2
Cocklebur	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	5	0	0	0	3	0	0	3	3	3	0	0	0	0	0	0	7	0	7	4	0	0
Crabgrass	7	0	10	9	9	6	7	4	9	7	9	7	0	10	10	10	10	10	9	10	10	10
Giant foxtail	9	5	10	9	9	6	10	7	10	10	10	9	0	10	10	10	10	10	9	10	10	10
Morningglory	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0
Nutsedge	9	3	0	0	0	0	0	0	0	0	0	0	0	-	0	0	10	0	0	0	0	0
Rape	8	3	0	3	8	0	3	7	7	6	7	0	0	0	0	2	4	4	7	-	9	2
Redroot pigweed	10	10	9	8	10	6	10	8	9	9	8	9	4	0	0	0	10	9	8	-	4	4
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	6	0	6	7	6	0	2	0	5	6	4	2	2	0	0	3	5	7	6	-	8	6
Velvetleaf	4	0	0	7	4	0	0	0	2	2	3	2	0	0	0	2	8	2	4	3	2	2
Wheat	7	2	0	3	0	0	4	5	3	5	4	6	3	0	0	0	2	0	7	-	8	0
Wild oats	9	3	7	7	-	0	9	7	6	7	8	5	8	0	0	0	4	0	8	-	9	3

Table B	COMPOUND																					
Rate 250 g/ha	528	531	532	533	534	535	536	540	541	543	544	545	546	548	549	550	551	552	553	554	555	556
Preem rgence																						
B. signalgrass	0	2	0	9	9	0	0	0	0	4	6	0	0	3	0	9	9	-	9	6	-	7
Bedstraw	0	0	-	0	0	-	0	0	0	0	7	0	8	10	5	0	-	0	2	0	0	0
Blackgrass	0	9	0	9	9	0	0	0	0	0	2	2	0	3	6	7	9	0	7	4	0	10
Cocklebur	0	0	0	0	0	0	0	9	-	0	0	0	0	0	0	0	0	0	0	0	2	0
Corn	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	10	10	10	10	10	10	0	10	10	6	10	10	10	10	10	10	10	8	10	-	10	9
Giant foxtail	10	10	10	10	10	10	10	10	10	9	10	10	10	10	10	10	10	10	10	9	10	10
Morningglory	0	0	0	0	2	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	7	6	2	0	2	0	0	3	0	0	2	0	6	3	0	3	0	0	3
Redroot pigweed	0	0	0	8	0	4	0	3	0	9	3	9	10	2	-	9	10	4	9	-	3	5
Soybean	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0
Sugarbeets	0	3	2	7	6	5	2	0	0	6	0	2	2	2	0	5	7	0	3	0	-	0
Velvetleaf	0	2	0	5	2	2	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3
Wheat	0	0	0	0	3	0	0	0	3	0	0	0	0	0	-	2	3	0	0	-	2	3
Wild oats	0	0	0	9	9	0	0	2	5	0	2	2	0	2	0	2	3	0	3	2	0	4

Table B	COMPOUND																					
Rate 250 g/ha	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578
Preem rgence																						
B. signalgrass	7	3	9	7	8	10	9	6	0	10	2	8	9	0	3	0	9	10	10	6	4	9
Bedstraw	0	0	0	5	2	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Blackgrass	8	6	10	9	9	10	9	5	0	10	0	8	9	0	3	0	2	2	7	6	3	0
Cockl bur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	6	5	2	9	4	4	0	2	0	5	0	0	0	0	0	0	0	0	2	2
Crabgrass	10	9	10	9	9	10	10	9	0	9	9	9	9	9	3	0	9	9	9	9	9	9
Giant foxtail	10	9	10	10	6	8	10	9	0	10	10	10	9	9	9	4	9	10	10	9	9	10
Morningglory	0	0	4	3	2	0	0	2	0	0	0	2	0	0	2	0	0	0	0	0	8	0
Nutsedge	0	0	-	7	-	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Rape	0	2	10	7	5	10	9	0	0	7	0	5	4	0	0	0	3	0	2	2	0	2
Redroot pigweed	3	2	10	9	9	10	9	3	0	9	8	4	9	0	9	0	9	-	10	10	0	9
Soybean	0	0	3	1	0	9	3	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Sugarb ets	3	0	9	3	2	9	3	3	0	6	0	6	0	0	0	0	2	0	0	4	0	3
Velvetleaf	0	0	6	2	0	0	6	6	0	0	0	6	0	0	0	0	0	2	0	0	3	2

Wheat	0	0	9	6	6	9	9	7	0	6	0	0	0	0	3	0	0	0	0	8	0	0
Wild oats	0	0	9	5	5	10	9	4	0	8	0	6	6	0	3	0	0	0	2	3	0	2

Table B	COMPOUND																					
Rate 250 g/ha	579	580	581	582	584	585	586	587	588	589	590	591	592	593	594	595	596	598	599	600	601	602
Preemergence																						
B. signalgrass	2	6	2	2	-	9	8	5	5	0	0	0	0	0	5	7	0	0	2	0	8	7
Bedstraw	0	6	7	6	9	9	-	-	0	-	-	-	-	0	2	-	0	0	0	0	0	0
Blackgrass	0	7	0	0	8	8	9	6	5	0	0	0	0	0	9	10	0	0	3	0	8	6
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	2	7	0	2	3	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0
Crabgrass	10	9	8	0	9	9	10	8	8	7	2	0	2	0	9	9	1	0	5	0	10	9
Giant foxtail	10	10	9	8	9	9	10	9	8	10	7	0	0	0	10	10	0	0	9	0	10	10
Morningglory	0	0	4	0	4	2	1	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0
Nutsedge	0	0	4	0	0	0	0	0	0	-	0	0	0	0	3	4	0	0	0	0	-	0
Rape	0	7	2	0	4	9	0	0	0	0	0	0	0	0	6	7	0	0	0	0	0	3
Redroot pigweed	2	10	9	4	9	10	10	1	9	0	0	0	0	0	10	10	0	0	0	0	10	8
Soybean	0	0	5	0	0	0	0	0	5	0	0	0	0	0	0	2	0	0	0	0	0	0
Sugarbeets	0	4	0	0	3	7	1	0	0	0	0	0	0	0	5	9	0	0	0	0	5	4
Velvetleaf	0	2	5	4	2	7	2	0	2	0	0	0	0	0	6	9	0	0	0	0	5	6
Wheat	0	2	2	0	0	5	3	1	3	0	0	0	0	0	0	3	0	0	0	0	2	0
Wild oats	0	2	0	0	4	9	10	7	2	0	0	0	0	0	2	9	0	0	0	0	8	5

Table B	COMPOUND																					
Rate 250 g/ha	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624
Preemergence																						
B. signalgrass	0	0	0	0	8	-	9	9	10	10	9	0	0	0	4	0	0	0	0	0	0	6
Bedstraw	-	0	0	-	-	-	8	-	-	-	-	0	0	0	0	0	0	0	0	-	-	0
Blackgrass	0	0	0	0	8	7	9	10	10	10	10	3	0	4	6	0	0	0	0	3	0	8
Cocklebur	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	-	0	0	0	0	0	0
Corn	0	0	0	0	0	0	6	7	9	8	9	0	0	0	0	0	0	0	0	0	0	2
Crabgrass	0	0	5	7	9	10	8	10	10	10	10	8	0	0	5	0	6	0	7	7	0	9
Giant foxtail	0	3	10	9	10	10	10	10	10	10	10	9	0	7	9	2	7	2	7	9	8	10
Morningglory	0	0	0	0	0	0	4	6	3	2	7	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	-	0	0	0	0	0	0
Rape	0	0	0	0	7	5	6	10	8	8	10	0	0	0	0	0	0	0	0	0	0	1
Redroot pigweed	0	0	0	0	9	7	8	10	10	10	10	0	0	8	0	0	0	0	0	10	0	3
Soybean	0	0	0	0	0	1	6	8	4	2	0	0	0	0	0	0	0	0	0	0	0	3

Sugarbe ts	0	0	0	0	0	3	7	8	5	6	8	0	0	0	0	0	0	0	0	0	0	7
Velv tleaf	0	0	0	0	7	6	8	8	8	7	7	0	0	0	0	0	0	0	0	0	0	1
Wheat	0	0	0	0	3	0	3	5	6	5	5	0	0	0	0	0	0	0	0	0	0	6
Wild oats	0	0	0	0	2	3	8	9	8	9	9	0	0	0	2	0	0	0	0	0	0	6

Table B	COMPOUND																					
Rate 250 g/ha	625	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647
Preemergence																						
B. signalgrass	8	8	8	5	7	10	6	6	7	9	8	8	8	5	4	6	5	2	2	0	0	9
Bedstraw	-	8	10	3	0	0	-	-	-	7	9	2	-	-	-	-	-	-	-	-	-	-
Blackgrass	7	9	10	8	8	9	7	5	8	9	4	9	9	2	0	2	4	0	0	0	0	10
Cockl bur	0	6	4	3	-	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1
Corn	0	6	7	6	3	8	4	0	0	2	0	0	-	0	0	0	0	0	0	0	0	5
Crabgrass	8	9	9	9	9	9	8	9	10	9	10	10	9	9	9	7	10	9	3	4	0	9
Giant foxtail	10	10	10	10	10	10	10	10	10	10	10	10	10	9	10	9	10	10	6	5	0	10
Morningglory	2	6	5	0	0	4	4	0	0	0	0	0	2	0	0	0	0	0	3	0	0	7
Nutsedge	0	7	6	5	0	4	0	0	0	3	0	0	5	0	-	0	0	0	-	0	0	-
Rape	-	9	4	4	0	6	0	1	6	7	7	2	8	3	3	-	4	0	2	0	0	10
Redroot pigweed	4	10	9	10	10	10	6	2	10	10	10	7	10	2	2	0	2	0	0	0	0	10
Soybean	0	0	4	0	0	9	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1
Sugarbeets	0	8	7	3	4	4	0	0	5	8	6	3	6	0	6	0	0	0	0	0	0	8
Velvetl af	1	10	9	6	6	7	6	0	4	3	2	0	5	0	0	0	0	0	0	0	0	8
Wheat	0	7	7	3	3	8	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	8
Wild oats	3	5	8	9	8	8	3	3	5	9	0	0	10	0	3	0	2	0	0	0	0	9

Tabl B	COMPOUND																					
Rate 250 g/ha	648	649	650	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670
Preem rgence																						
B. signalgrass	0	0	0	2	0	0	0	6	9	8	4	4	3	3	0	5	8	7	8	8	10	10
Bedstraw	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9
Blackgrass	2	0	0	0	0	2	2	5	7	7	7	6	4	4	0	6	8	9	8	10	10	10
Cocklebur	-	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	-
Corn	0	0	0	0	0	0	0	0	-	2	7	0	0	0	0	0	0	8	7	4	9	8
Crabgrass	9	5	9	8	6	7	8	8	9	8	-	8	3	4	0	9	9	9	10	8	9	10
Giant foxtail	9	9	10	9	2	9	9	10	9	9	9	10	8	9	5	10	10	10	10	9	10	10
Morningglory	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	3	0	0	8
Nutsedge	0	0	7	0	-	0	0	0	5	0	0	0	0	4	0	0	0	0	3	0	-	8
Rape	0	0	0	0	0	0	0	0	10	5	2	3	0	0	0	1	8	10	10	8	8	10

Redroot pigweed	0	0	7	0	0	3	2	6	10	9	9	7	3	3	7	7	9	10	10	10	10	10
Soybean	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	3	6	1	3	8
Sugarbeets	0	0	0	0	0	0	0	3	10	6	0	0	0	0	0	0	6	7	8	6	8	9
Velvetleaf	0	0	0	0	0	0	0	6	8	3	6	0	0	0	0	5	4	7	8	7	0	8
Wheat	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	4	4	5	5	8	9
Wild oats	0	0	0	0	0	0	0	6	8	3	3	2	0	0	0	3	7	9	8	8	10	9

Table B	COMPOUND																					
Rate 250 g/ha	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	689	691	692	693	694
Preemergence																						
B. signalgrass	7	6	7	8	8	4	3	0	0	0	0	7	4	4	9	7	10	9	9	10	0	6
Bedstraw	-	0	4	-	10	-	-	-	-	-	-	0	0	0	0	0	-	7	9	1	0	0
Blackgrass	8	8	9	9	9	4	0	0	0	0	1	8	7	4	10	8	9	10	10	10	0	9
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	3	0	4	5	6	3	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	1
Crabgrass	8	10	10	9	9	6	6	0	0	3	2	9	9	9	9	10	4	10	10	10	0	9
Giant foxtail	10	10	10	10	10	10	8	0	3	4	6	10	9	10	10	10	6	10	10	10	2	10
Morningglory	5	0	0	7	3	0	0	0	0	0	0	2	0	1	1	0	3	3	0	1	0	2
Nutsedge	6	0	2	5	3	0	0	-	0	0	0	0	0	0	-	0	0	0	-	0	0	-
Rape	0	7	2	5	7	5	0	0	0	0	0	3	0	0	2	2	8	7	6	3	0	0
Redroot pigweed	10	7	10	10	10	-	7	0	0	0	0	5	5	1	5	7	9	7	8	8	0	8
Soybean	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0
Sugarbeets	9	7	3	7	8	5	0	0	0	0	0	3	0	0	1	2	9	6	5	2	0	0
Velvetleaf	7	3	3	8	10	4	0	0	0	0	0	0	0	0	0	0	6	6	0	1	0	1
Wheat	3	0	0	8	5	2	0	0	0	0	0	0	0	0	0	0	7	2	0	0	0	0
Wild oats	7	5	9	8	7	3	0	0	0	0	0	2	0	2	-	5	10	9	9	10	0	3

Table B	COMPOUND																					
Rate 250 g/ha	695	696	697	698	699	700	701	702	703	704	706	707	708	709	710	711	712	713	714	715	716	717
Preemergence																						
B. signalgrass	5	-	0	3	9	8	0	2	3	8	8	9	0	0	8	7	8	8	10	9	0	7
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	10	0	0	5	6	2	2	9	0	0	0
Blackgrass	6	7	2	2	10	8	2	9	6	10	10	10	3	0	9	8	8	9	9	9	0	10
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	8	3	0	0	0	0	0	2	0	0	0	0	0	0	5	2	0	3
Crabgrass	9	9	4	8	10	10	10	10	9	8	8	9	10	7	10	10	10	10	10	10	0	10
Giant foxtail	10	10	5	9	10	10	10	10	9	8	7	10	8	7	10	10	10	10	10	10	0	10
Morningglory	0	0	4	0	5	0	0	0	1	1	1	4	0	0	0	3	0	0	0	2	0	0

Nutsedge	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0
Rape	0	2	0	0	9	2	0	0	0	1	3	10	0	0	8	7	7	8	6	8	0	0
Redroot pigweed	5	6	0	0	6	2	0	5	4	-	10	10	-	5	10	9	8	8	10	10	0	8
Soybean	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Sugarbeets	0	3	0	0	7	3	0	3	0	4	4	8	0	0	8	8	7	7	4	7	0	2
Velvetleaf	0	2	0	0	5	0	0	0	0	0	5	5	2	0	7	6	3	5	2	6	0	0
Wheat	0	0	0	2	6	0	0	0	0	6	5	2	0	0	7	8	0	1	6	3	0	0
Wild oats	0	6	0	0	10	9	2	7	2	2	8	9	0	0	9	9	3	8	6	9	0	9

Table B									COMPOUND													
Rate 250 g/ha	718	719	720	721	722	723	724	725	726	727	728	729	730	732	733	734	735	736	737	738	739	740
Preemergence																						
B. signalgrass	7	7	10	8	0	2	0	4	7	7	8	10	7	0	8	9	9	3	8	10	-	-
Bedstraw	0	0	10	10	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	10	0
Blackgrass	9	9	10	10	0	0	0	7	8	8	9	10	10	0	8	9	10	4	9	10	3	8
Cocklebur	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Corn	0	0	4	5	0	0	0	0	0	0	0	6	4	0	0	9	8	2	3	7	2	0
Crabgrass	10	8	10	9	0	2	7	8	9	9	-	9	9	0	9	9	10	4	10	9	9	9
Giant foxtail	10	8	10	10	4	9	7	10	10	10	8	9	10	0	9	10	10	9	10	10	9	9
Morningglory	0	3	-	2	2	0	0	1	1	0	2	2	0	0	2	3	2	2	2	2	0	0
Nutsedge	0	0	-	0	0	0	0	-	0	0	-	-	3	0	0	0	0	0	0	4	0	0
Rape	2	2	9	9	0	0	0	0	0	1	6	3	2	0	3	5	8	0	5	6	0	5
Redroot pigweed	6	10	10	10	0	0	0	0	7	5	8	10	10	0	5	8	8	2	6	8	9	9
Soybean	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	0	0	0	0
Sugarbeets	2	6	8	7	0	0	0	0	5	0	4	0	4	0	0	5	6	0	6	6	2	3
Velvetleaf	0	0	3	8	0	0	0	0	0	0	0	4	6	0	0	5	3	0	4	6	2	0
Wheat	0	3	5	3	0	0	0	0	0	0	5	4	0	0	0	8	-	3	2	5	0	0
Wild oats	-	9	9	8	0	0	0	4	8	3	10	10	7	0	2	10	8	9	8	10	0	2

Table B									COMPOUND													
Rate 250 g/ha	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762
Preemergence																						
B. signalgrass	2	0	4	9	10	9	-	3	8	8	-	-	9	8	0	0	2	7	8	10	0	6
Bedstraw	0	0	0	0	5	-	-	0	0	0	9	10	3	0	0	0	0	3	0	0	0	0
Blackgrass	0	0	9	9	9	10	-	-	6	8	10	9	9	9	0	4	3	8	5	6	0	7
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	5	2	3	6	0	0	-	8	0	0	0	0	0	0	-	0	0	0	0
Crabgrass	5	0	9	9	10	10	10	10	10	9	10	10	9	9	0	9	9	10	8	10	5	4

Giant foxtail	9	0	9	9	10	10	10	10	10	10	10	10	9	9	0	9	9	10	10	10	8	9
Morningglory	0	0	0	0	0	6	0	0	0	6	5	0	0	1	0	0	0	0	0	0	0	0
Nutsedge	0	0	2	5	0	-	4	0	0	7	0	-	0	3	0	0	0	0	0	0	0	0
Rape	0	0	9	6	7	9	10	0	0	8	7	5	7	6	0	0	0	4	0	2	0	0
Redroot pigweed	0	0	9	9	10	10	8	10	7	10	10	10	9	9	0	0	2	8	3	9	0	3
Soybean	0	0	0	0	0	5	0	0	2	5	7	0	0	0	0	0	0	0	0	0	0	0
Sugarbe ts	0	0	4	7	4	7	7	2	6	5	5	3	1	3	0	0	0	7	4	3	0	4
Velvetl af	3	0	3	0	4	7	7	0	0	7	8	0	-	3	0	0	0	4	0	0	0	0
Wheat	0	0	0	3	0	8	0	0	1	5	5	0	3	7	0	0	0	5	3	0	0	0
Wild oats	0	0	5	9	8	10	3	2	5	7	10	7	8	8	0	0	2	8	5	2	0	0

Table B	COMPOUND															
Rate 250 g/ha	763	764	765	766	767	772	773	774	775	776	777	778	780	790	791	792
Preemergence																
B. signalgrass	9	9	7	10	-	0	0	0	-	-	-	-	8	9	0	9
Bedstraw	7	5	2	10	-	0	0	0	0	0	-	0	0	7	-	4
Blackgrass	9	8	8	8	10	0	0	0	9	2	10	10	9	9	7	8
Cocklebur	0	0	0	-	0	0	0	0	0	-	0	0	2	10	0	0
Corn	0	6	0	0	0	0	0	0	0	1	0	0	6	8	0	4
Crabgrass	10	10	10	10	10	0	0	0	9	9	10	10	10	10	10	10
Giant foxtail	9	10	10	9	10	0	0	0	10	9	10	10	10	10	10	10
Morningglory	0	0	0	3	0	0	0	0	0	2	1	0	0	2	0	0
Nutsedge	-	0	0	4	0	0	0	0	0	0	2	9	0	0	0	0
Rape	6	9	5	9	9	0	0	0	0	0	0	3	2	6	3	4
Redroot pigweed	10	10	10	10	10	0	0	0	8	0	-	3	6	9	5	9
Soybean	0	3	0	0	2	0	0	0	0	0	0	1	2	0	5	0
Sugarbe ts	3	5	8	8	8	0	0	0	3	0	2	2	4	6	0	6
Velvetleaf	1	5	6	8	2	0	0	0	0	0	0	0	3	7	0	3
Wheat	5	-	7	4	5	0	0	0	7	2	3	4	5	7	0	0
Wild oats	9	6	8	7	9	0	0	0	2	2	8	8	4	5	5	8

Table B	COMPOUND																						
Rate 125 g/ha	18	35	47	69	70	71	72	129	131	146	165	166	180	181	182	183	184	185	186	187	189	190	191
Pre-emergence																							
Barnyardgrass	2	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	192	193	194	195	196	197	198	200	201	202	203	204	205	206	207	208	210	211	212	214	215	216
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	264
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	265	266	267	268	269	270	271	272	273	274	276	277	278	279	280	281	282	283	284	285	286	287
Pr -emergence																						
Barnyardgrass	0	0	0	0	0	0	3	0	4	0	6	2	0	0	0	0	7	3	1	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Ric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	288	289	290	291	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310
Pre-emergence																						
Barnyardgrass	4	0	4	4	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B COMPOUND

Rate 125 g/ha	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	6	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	333	334	335	336	337	338	339	340	341	346	350	351	353	354	358	365	366	367	368	369	370	371
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	8	6	8	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	4	0	0	0	2	0	6	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	372	373	374	375	376	378	379	380	381	382	383	384	385	387	388	389	390	391	392	393	395	401
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	1	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	402	403	404	405	406	407	408	409	410	411	414	437	438	439	441	442	443	444	445	446	447	448
Pre-emergence																						
Barnyardgrass	5	4	9	0	0	0	0	2	4	8	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	465	466	467	468	469	470	471
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	472	473	474	476	477	478	479	480	482	483	485	486	487	488	489	490	492	493	494	495	496	498

Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tabl B									COMPOUND													
Rate 125 g/ha	499	509	521	528	529	531	532	538	539	546	550	552	556	558	560	561	567	568	570	577	580	586
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	-	-	0	1	-	0	-	0	-	0	-	0	0	0	1	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B									COMPOUND													
Rate 125 g/ha	587	588	589	590	591	592	593	594	595	596	598	599	600	601	602	603	604	605	606	607	608	609
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B									COMPOUND													
Rate 125 g/ha	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	627	628	629	630	631	632
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B									COMPOUND													
Rate 125 g/ha	633	634	636	637	638	639	640	641	642	643	644	645	646	647	649	650	651	655	656	657	658	659
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B									COMPOUND													
Rate 125 g/ha	660	661	662	663	664	665	666	667	668	671	674	675	676	677	678	679	680	681	692	694	695	696
Pre-emergence																						

Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0

Tabl B	COMPOUND														
Rate 125 g/ha	697	699	701	702	705	706	715	720	721	724	740	741	758	765	793
Pre-emergence															
Barnyardgrass	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	8	0	0	0	0	0	0	0	0	0	0	0	0	7
Rice	0	0	-	0	1	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7

Table B	COMPOUND																												
Rate 125 g/ha	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Postemergence																													
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
Bedstraw	0	0	0	5	3	0	0	2	0	0	0	0	0	0	0	0	0	7	6	3	0	2	0	3	4	0	0	-	0
Blackgrass	0	0	0	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5	0	0	2	0
Cocklebur	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	5	3	0	0	0	0	6	0	0	1	0	1	0	3	3	0	0	0	4	1	8	7	0	0	6	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0
Giant foxtail	0	0	0	5	1	2	0	0	0	5	0	0	0	0	0	0	2	1	0	0	0	2	2	2	5	0	0	2	0
Morningglory	0	0	0	2	2	0	0	0	0	2	0	0	0	2	2	1	7	1	0	7	2	2	8	9	1	1	0	2	0
Nuts dge	0	0	0	0	0	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	2	0	0	4	7	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0	1	0	2	0	0	0	1	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soybean	0	0	0	4	5	3	0	3	0	3	0	0	1	2	2	1	2	3	3	3	2	3	3	3	3	1	1	3	2
Sugarb ets	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Velvetleaf	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																												
Rate 125 g/ha	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58

Postemergence																													
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Barnyardgrass	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0
Bedstraw	0	0	0	1	4	2	-	0	0	-	-	-	0	0	0	5	0	3	0	0	-	0	5	3	0	0	0	0	0
Blackgrass	0	4	0	5	2	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0	-	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Crabgrass	8	2	2	2	0	0	3	0	7	0	1	1	0	2	0	0	0	0	1	1	-	0	1	4	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0
Giant foxtail	2	0	0	1	0	0	3	0	2	0	0	0	0	0	0	0	1	0	0	4	-	0	3	3	3	0	0	0	0
Morningglory	1	1	7	8	2	7	9	0	0	0	6	2	0	3	0	0	0	2	0	0	-	0	1	1	0	1	1	1	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	2	0	7	5	0	0	0	1	0	0	2	0	0	0	0	0	0	-	0	0	3	0	0	0	0	0
Rice	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	-	0	-	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0
Soybean	1	1	2	3	0	1	5	0	0	4	3	3	0	3	0	1	1	2	1	1	-	0	2	3	0	1	2	1	1
Sugarbeets	0	0	0	2	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0

Table B											COMPOUND																		
Rate 125 g/ha	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
Postemergence																													
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	-	0	0	0
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Bedstraw	0	7	3	0	0	0	0	0	5	7	4	0	0	0	0	0	0	0	0	0	3	0	0	0	0	-	0	4	4
Blackgrass	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2	0	3	0	2	3	0	0	-	0	0	0
Cocklebur	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	-	0	1	1
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0
Crabgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	2	4	9	5	0	0	-	0	3	3
Ducksalad	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Giant foxtail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	4	0	3	2	2	2	0	0	-	0	2	2
Morningglory	1	2	2	2	2	0	1	1	2	2	0	0	0	0	3	2	1	2	0	8	5	8	2	7	0	-	0	7	7
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	-	0	0	0

Redroot pigweed	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	-	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soybean	1	3	3	1	2	0	1	1	1	2	2	0	0	0	0	-	1	1	0	1	1	1	0	0	0	-	0	2	2
Sugarbeets	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	-	3	0	0	0	-	0	3	3
Velvetleaf	0	0	0	0	3	0	3	0	0	0	0	0	0	0	3	4	0	0	0	2	0	0	0	0	2	-	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0

Table B											COMPOUND														
Rate 125 g/ha	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
Postemergence																									
B. signalgrass	2	0	0	4	5	5	0	0	0	0	0	0	0	0	0	0	0	2	0	7	3	7	0	0	0
Barnyardgrass	-	0	0	-	-	0	0	0	0	0	9	0	-	0	0	-	-	0	0	-	0	0	0	0	0
Bedstraw	8	0	-	-	-	-	-	0	0	0	-	5	0	-	0	-	-	0	0	3	0	8	-	5	0
Blackgrass	5	0	0	8	7	8	0	0	0	0	0	3	0	0	0	1	0	6	0	7	7	8	4	3	4
Cocklebur	0	1	3	3	1	1	1	0	0	0	0	2	0	0	0	0	0	0	2	0	0	3	2	0	1
Corn	0	0	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Crabgrass	0	0	2	9	8	8	3	0	3	2	0	2	0	0	0	4	4	7	0	8	8	9	3	2	4
Ducksalad	-	0	0	-	-	0	0	0	0	0	2	0	-	0	0	-	-	0	0	-	0	0	0	0	0
Giant foxtail	3	0	0	8	8	7	0	0	0	0	0	0	0	0	0	1	3	3	2	8	7	9	2	2	7
Morningglory	10	0	3	7	8	10	10	1	1	1	0	3	0	0	0	10	10	2	7	3	3	3	5	5	10
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0
Rape	0	0	0	3	3	3	2	0	0	0	0	2	0	0	0	0	0	0	0	2	0	3	4	3	2
Redroot pigweed	3	0	5	4	3	4	0	3	0	0	0	4	0	0	0	0	3	0	0	0	0	5	4	3	3
Rice	-	0	0	-	-	0	0	0	0	0	4	0	-	0	0	-	-	0	0	-	0	0	0	0	0
S. Flatsedge	-	0	0	-	-	0	0	0	0	0	8	0	-	0	0	-	-	0	0	-	0	0	0	0	0
Soybean	1	0	4	3	3	5	5	1	1	0	1	2	0	2	0	4	5	1	0	4	3	6	3	3	4
Sugarbeets	5	0	0	6	4	3	2	2	0	0	0	4	0	0	0	2	1	0	0	2	0	4	3	3	2
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	5	4	2	0	0	0
Wheat	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
Wild oats	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0

Table B									COMPOUND													
Rate 125 g/ha	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134
Postemergence																						
B. signalgrass	7	0	0	9	8	0	0	4	0	0	0	0	0	0	0	0	0	2	5	3	0	0
Barnyardgrass	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-

Bedstraw	4	6	0	6	0	0	2	-	-	-	-	-	-	0	0	0	0	-	8	0	4	4
Blackgrass	8	2	4	9	9	4	3	4	0	0	6	0	0	0	0	0	0	5	8	2	2	0
Cocklebur	1	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	3	0	2	0
Corn	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0
Crabgrass	9	8	0	9	9	7	3	7	6	3	4	0	0	0	0	0	4	9	7	7	2	0
Ducksalad	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
Giant foxtail	9	9	4	9	9	8	8	6	1	2	5	0	0	0	0	0	6	9	8	9	2	0
Morningglory	5	4	3	4	7	4	7	7	6	3	9	0	0	0	0	0	4	2	7	6	3	6
Nutsedge	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Rape	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0	0
Redroot pigweed	4	2	0	0	0	0	0	0	2	1	-	0	0	0	0	0	0	3	6	0	0	0
Rice	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
S. Flatsedge	0	0	0	0	0	-	-	0	5	0	0	0	0	0	0	0	-	-	-	-	-	-
Soybean	6	3	1	6	5	1	2	3	5	3	4	3	4	0	0	0	2	2	7	3	3	1
Sugarbeets	4	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Velvetleaf	1	1	0	4	3	0	2	0	0	0	0	0	0	0	0	0	0	3	7	2	0	0
Wheat	3	0	0	6	6	0	0	0	0	0	1	0	0	0	0	0	0	1	3	2	0	0
Wild oats	2	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	2	3	2	0	0

Table B

	COMPOUND																					
Rate 125 g/ha	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156
Postemergence																						
B. signalgrass	0	0	4	7	2	0	0	0	0	0	0	8	7	3	0	0	4	0	0	0	0	0
Barnyardgrass	0	0	0	0	0	0	0	0	8	0	6	0	0	0	0	0	0	0	0	0	0	0
Bedstraw	0	5	8	7	2	5	2	2	6	2	2	6	4	5	0	0	3	0	0	0	0	0
Blackgrass	0	0	6	9	2	3	0	0	3	4	1	8	7	7	0	0	8	0	0	0	0	0
Cocklebur	0	2	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	4	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Crabgrass	0	2	8	9	8	1	0	3	8	5	3	9	9	8	0	0	9	0	0	0	2	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Giant foxtail	0	4	8	9	8	1	0	2	2	2	0	9	8	8	0	1	8	0	0	0	3	0
Morningglory	1	10	7	5	5	8	2	3	6	2	8	5	3	3	0	0	-	0	0	0	0	1
Nutsedge	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
Rape	0	0	-	0	2	0	0	0	0	0	2	2	1	2	0	0	0	0	0	0	0	0
Redroot pigweed	0	4	4	5	3	1	0	0	5	0	0	6	3	2	0	0	3	0	0	0	0	0
Rice	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Soybean	2	4	6	3	2	3	3	3	3	3	3	6	5	4	0	1	4	0	0	2	1	1
Sugarbeets	0	4	3	0	0	0	0	0	6	0	0	3	0	3	0	0	3	0	0	0	0	0
Velvetl af	0	0	0	4	4	0	0	1	2	0	0	2	0	0	0	0	-	0	0	0	0	0
Wheat	0	0	0	8	2	0	0	0	0	0	0	2	4	1	0	0	2	0	0	0	0	0
Wild oats	0	0	2	2	2	0	0	0	0	0	0	3	3	1	0	0	2	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178
Postemergence																						
B. signalgrass	0	0	0	0	0	0	2	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0
Barnyardgrass	-	0	0	0	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	0	-
Bedstraw	0	0	0	0	3	2	4	0	0	0	0	3	2	0	7	0	0	4	0	0	0	0
Blackgrass	0	1	0	0	0	0	4	0	3	4	0	0	4	9	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	2	2	7	0	4	1	3	1	8	9	0	3	4	4	0	0	0	0
Ducksalad	-	0	0	0	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	0	-
Giant foxtail	1	0	0	0	0	2	7	0	1	0	0	0	2	7	0	0	0	0	0	0	0	0
Morningglory	1	2	2	0	5	6	2	0	3	1	5	8	1	1	1	5	10	5	1	2	0	2
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	2	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	4	0	0	0	7
Rice	-	0	0	0	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	0	-
S. Flatsedge	-	0	0	0	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-	0	0	-
Soybean	1	3	3	0	2	4	2	1	4	0	3	1	1	3	1	3	2	2	1	2	1	1
Sugarbeets	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	3	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-
Bedstraw	5	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Blackgrass	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	2	0	0	0	0	0

	201	202	203	204	205	206	207	208	210	211	212	213	214	215	216	217	218	219	220	221	222	223
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	2	1
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-
Giant foxtail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0
Morningglory	5	0	0	0	0	6	1	2	0	0	0	0	2	3	0	0	0	0	5	0	4	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	4	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-
Soybean	1	0	0	0	1	1	2	1	0	2	0	0	3	3	1	0	3	0	0	0	2	2
Sugarbeets	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	201	202	203	204	205	206	207	208	210	211	212	213	214	215	216	217	218	219	220	221	222	223
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	7	0	2	7	3	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	2	0	0	0	0	0	0	2	7	0	3	0	0	0	0	8	6	8	7	3	3
Blackgrass	0	3	0	2	0	0	2	0	0	3	6	0	4	0	4	6	5	7	7	9	0	0
Cocklebur	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Crabgrass	0	0	0	0	0	0	0	0	0	0	6	0	3	0	2	2	4	4	5	6	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	0	0	0	0	0	0	0	6	0	0	0	2	2	5	7	6	7	0	0
Morningglory	1	5	0	3	0	1	2	1	2	6	3	6	3	2	4	0	4	6	5	0	1	3
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	1	0	0	0	0	0	0	0	2	0	2	0	0	0	0	1	3	0	4	0	0
Redroot pigweed	0	4	0	0	0	0	0	0	0	4	5	7	0	0	0	0	1	7	1	8	0	2
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	2	0	1	1	1	2	1	1	4	2	1	1	1	1	1	4	5	5	2	3	3
Sugarbeets	0	3	0	0	0	0	0	0	0	2	0	3	0	0	0	0	2	4	0	4	0	1
V lvetleaf	0	0	0	1	0	0	1	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0

Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	6	4	2	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245
Postemergence																						
B. signalgrass	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	4	0	4
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	3	0	3	8	0	0	0	0	0	0	0	0	0	0	2	3	3	3	5	4	0	9
Blackgrass	0	9	5	2	0	0	0	0	2	0	0	0	0	0	0	0	0	7	9	8	0	7
Cocklebur	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	1	1	0	5	2	0	0
Corn	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	2	0	4
Crabgrass	0	8	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	7	9	8	0	7
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	8	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	8	7	0	8
Morningglory	2	3	7	4	3	0	2	2	8	3	0	2	4	2	2	2	5	4	7	7	0	9
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	2	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	2	0	4	2	0	6
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	3	3	2	3	0	0	0	1	3	3	0	0	1	1	1	1	1	2	5	4	0	3
Sugarbeets	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	2
Velvetleaf	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	1	1	0	4	2	0	4
Wheat	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	4	0	5
Wild oats	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3

Table B	COMPOUND																					
Rate 125 g/ha	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	7	0	0	0	0	6	0	0	4	0	0	0	4	0	7	-	0	0	6	2	0	0
Blackgrass	2	0	0	0	0	4	2	0	0	2	0	0	5	0	0	0	0	0	2	4	5	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Giant foxtail	0	0	0	0	0	2	4	0	0	3	0	0	-	0	0	0	0	0	0	0	0	0
Morningglory	8	1	0	0	6	7	2	0	9	7	8	8	6	7	2	4	4	2	10	6	4	1
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	2	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	3	0
Redroot pigweed	2	0	0	0	0	0	0	0	2	0	1	3	2	3	2	0	3	0	0	2	3	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	0	0	3	2	2	1	0	1	6	3	3	4	3	1	3	3	0	3	3	7	2
Sugarbeets	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	5	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	268	269	270	271	272	273	274	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	4	0	6	0	0	0	0	6	0	0	0	-	5	1	5	5	2	8	0	3	0
Blackgrass	0	0	0	4	0	1	0	1	8	0	0	0	0	2	6	5	2	2	9	0	9	0
Cocklebur	0	-	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	1	0	1	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	1	3	0	5	0	5	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	3	0	0	0	1	3	0	0	0	0	0	3	2	0	0	8	0	5	0
Morningglory	2	3	0	2	1	0	0	6	8	3	1	0	2	6	9	7	5	3	2	8	6	6
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0
Rape	0	0	0	3	0	0	0	0	2	0	0	0	0	3	3	3	0	2	0	2	2	0
Redroot pigweed	0	4	0	5	0	0	0	0	2	0	0	0	2	6	4	4	0	3	6	0	5	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	0	1	0	5	1	3	3	5	4	1	0	1	-	3	4	4	2	1	3	2	3	2
Sugarbeets	0	0	0	2	0	0	0	0	2	0	0	0	0	6	2	3	2	2	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	4	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	0	5	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0

Table B COMPOUND

Rate 125 g/ha	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	3	0	2	6	4	0	0	0	7	0	0	0	0	0	0	0	0	0	0	4	0	0
Blackgrass	2	0	9	0	7	0	0	0	8	0	0	0	0	0	0	0	0	0	0	7	0	0
Cocklebur	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	8	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	9	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	8	0	6	0	0	0	7	0	0	1	0	0	0	0	0	0	0	7	0	0
Morningglory	4	1	5	6	5	0	0	3	5	0	0	1	0	3	0	2	2	0	1	5	4	0
Nutsedge	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Rape	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	2	0	5	0	0	0	3	0	0	1	0	3	3	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	3	0	2	3	2	0	3	3	6	2	0	2	2	4	4	2	2	1	2	4	2	2
Sugarbeets	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Wheat	0	0	6	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0

Table B									COMPOUND													
Rate 125 g/ha	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334
Postemergence																						
B. signalgrass	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	7	4	4	2	6	0	0	0	4	0	0	0	8	5	7	1	0	0	0	0	0	0
Blackgrass	0	4	3	1	8	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Cocklebur	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morningglory	3	2	0	4	3	0	2	1	7	4	0	0	6	7	8	8	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rape	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	2	0	0	0	6	3	3	0	0	0	4	5	3	0	0	0	1	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	3	3	3	4	0	1	3	-	3	1	1	2	5	6	2	1	1	0	2	2	1
Sugarbeets	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B								COMPOUND														
Rate 125 g/ha	335	336	337	338	339	340	341	342	343	344	345	348	349	350	351	352	353	354	355	356	357	358
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	4	0	0	1	0	0	0	2	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	2	0	0	0	2	2	0	3	3	-	4	8	0	2	2
Bedstraw	0	0	1	2	2	7	0	5	0	0	0	2	3	-	-	0	-	-	0	0	0	2
Blackgrass	0	0	0	0	0	0	0	0	3	0	0	3	4	4	2	8	4	5	3	6	6	6
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	0	1	0	0	2	0	1	1	3	0	2	0	0	2	0
Ducksalad	-	-	-	-	-	-	-	0	0	0	0	3	0	2	0	0	-	3	0	0	0	2
Giant foxtail	0	0	0	0	0	0	0	0	7	0	0	8	0	8	7	2	3	4	2	4	8	8
Morningglory	0	0	0	0	2	7	7	7	2	0	0	9	5	6	4	6	3	5	5	6	2	5
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1
Redroot pigweed	0	0	0	0	2	4	0	2	0	0	0	0	2	0	0	3	3	3	0	0	0	3
Rice	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	3	-	0	0	0	0	0
S. Flatsedge	-	-	-	-	-	-	-	4	0	0	0	6	5	2	6	7	-	8	2	4	0	0
Soybean	2	1	1	1	1	2	2	5	1	2	0	2	2	1	1	2	4	5	2	3	2	4
Sugarbeets	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	2
Wheat	0	0	0	0	0	0	0	0	4	0	0	3	0	0	0	3	0	0	2	3	5	3
Wild oats	0	0	0	0	0	0	0	0	4	0	0	3	0	0	0	0	0	0	3	3	4	3

Tabl B								COMPOUND														
Rate 125 g/ha	359	360	361	362	363	364	365	367	368	369	370	371	372	373	374	375	376	378	379	380	381	382
Postemergence																						
B. signalgrass	0	0	0	5	0	0	0	0	5	0	2	0	2	0	0	0	0	0	0	0	0	0

Barnyardgrass	0	2	-	-	-	0	-	-	-	0	0	-	0	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	7	9	4	0	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	-
Blackgrass	0	5	7	8	7	0	0	0	7	0	4	2	4	0	0	5	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0
Corn	0	2	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	2	2	6	2	0	0	2	8	0	7	4	2	0	0	4	0	0	0	1	0	0
Ducksalad	0	0	-	-	-	0	-	-	-	0	2	-	6	-	-	-	-	-	-	-	-	-
Giant foxtail	0	8	4	8	4	3	0	3	8	0	8	7	9	3	0	6	0	0	0	2	0	3
Morningglory	0	4	2	1	1	0	0	5	4	10	10	7	7	8	5	1	0	7	7	5	2	0
Nutsedg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	3	0	0	0	0	0	0	0	0	0	-	1	2	0	0	0	0	0	0	0
Redroot pigweed	0	0	5	4	0	0	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
Rice	0	0	-	-	-	0	-	-	-	0	0	-	0	-	-	-	-	-	-	-	-	-
S. Flatsedge	0	4	-	-	-	0	-	-	-	2	3	-	2	-	-	-	-	-	-	-	-	-
Soybean	2	2	4	5	5	2	0	1	5	0	2	1	1	3	2	1	0	0	1	1	2	3
Sugarbeets	0	0	5	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	4	0	4	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	3	2	6	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Table B									COMPOUND													
Rate 125 g/ha	383	384	385	387	388	389	390	391	392	393	394	395	396	397	398	400	401	402	403	404	405	406
Postemergence																						
B. signalgrass	0	3	3	1	6	0	5	0	5	0	1	0	0	0	0	2	0	2	2	2	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-
Bedstraw	0	0	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	3	2	-	-	-
Blackgrass	0	4	0	3	8	0	-	-	10	2	-	0	2	8	6	4	0	-	9	-	0	0
Cocklebur	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	2	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	1	7	7	2	4	3	7	0	2	1	2	2	0	6	3	-	0	3	3	3	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-
Giant foxtail	0	8	9	3	8	2	9	0	9	8	7	3	0	8	8	8	0	8	3	9	0	0
Morningglory	0	0	1	1	3	3	3	0	7	0	2	0	5	5	2	1	3	5	6	6	2	1
Nutsedge	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	-	8	0	0	-	0	0	0	0	0	0	-	8	3	3	0	0
Redroot pigweed	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-

S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-
Soybean	3	2	2	0	1	2	2	0	1	1	4	0	2	5	3	2	1	5	4	4	2	1
Sugarbeets	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0
Velvetleaf	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 125 g/ha	407	408	409	410	411	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430
Postemergence																						
B. signalgrass	0	0	5	0	3	0	0	6	0	0	0	2	3	0	0	0	2	5	0	0	0	1
Barnyardgrass	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bedstraw	-	6	2	-	-	-	-	3	0	-	0	0	4	-	-	0	-	-	-	-	-	0
Blackgrass	0	2	8	8	-	2	3	9	0	4	0	2	8	0	0	0	3	6	0	0	2	3
Cocklebur	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	4	9	4	4	3	1	6	0	0	0	2	7	0	0	0	7	6	0	0	1	2
Ducksalad	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Giant foxtail	0	9	8	9	9	-	8	8	0	0	0	8	9	0	0	0	7	7	2	0	1	8
Morningglory	10	6	8	6	-	7	4	8	3	3	2	4	8	0	2	0	5	7	0	1	1	2
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	-	-	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	2	0	3	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Rice	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	-	-	-	-	-	-	2	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0
Soybean	1	2	4	4	4	2	3	6	4	4	2	2	6	3	2	0	1	4	1	1	2	1
Sugarbeets	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 125 g/ha	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452
Postemergence																						
B. signalgrass	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Barnyardgrass	0	0	0	0	0	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	2	0	0	0	0	0	-	0	-	-	-	-	-	-	-	0	-	-	0	-
Blackgrass	0	2	5	0	0	0	0	0	0	0	0	0	0	2	0	8	0	0	0	0	0	0

Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	2	0	2	0	1	4	0	2	0	0	0	2	1	9	0	0	-	2	0	-
Ducksalad	0	0	0	0	0	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	3	4	0	3	0	0	5	0	4	0	0	0	7	0	9	0	0	0	5	0	4
Morningglory	1	1	2	0	2	0	1	8	0	8	0	4	3	0	4	2	2	0	5	0	1	2
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	0	0	0	0	0	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	1	2	0	1	0	0	1	0	6	0	0	1	1	1	2	1	1	1	1	1	1
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 125 g/ha	453	454	455	456	457	458	459	460	461	462	463	465	466	467	468	469	470	471	472	473	474	476
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	1	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	6	-
Blackgrass	0	0	8	4	0	3	1	-	0	0	0	2	-	0	5	7	0	2	0	0	-	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	-	-	-	-	0	8	1	6	0	0	0	1	9	0	-	6	0	3	7	2	5	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	5	2	7	2	0	9	0	0	0	0	0	5	-	0	3	9	0	1	7	2	6	0
Morningglory	0	9	8	3	0	0	8	7	7	0	0	1	2	7	3	9	0	3	3	1	1	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	2	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	0	1	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	2	2	3	0	1	3	3	3	1	1	1	4	0	1	1	0	2	2	1	4	1
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0

Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0

Table B									COMPOUND													
Rate 125 g/ha	477	478	479	480	481	482	483	485	486	487	488	489	490	492	493	494	495	496	497	498	499	500
Postemergence																						
B. signalgrass	0	0	2	3	0	0	0	0	0	0	4	2	4	0	0	0	0	0	0	0	0	5
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	0	0	-	0	-	0	1	2	2	3	3	-	-	-	-	-	0	-	-	9
Blackgrass	0	2	0	3	0	0	0	7	6	0	8	6	4	0	0	0	0	3	0	0	0	4
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Corn	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Crabgrass	2	3	3	6	2	0	0	6	3	3	7	5	6	-	0	0	0	0	0	-	0	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	2	6	3	5	2	0	0	7	7	2	8	8	8	0	0	0	0	0	0	2	0	8
Morningglory	7	3	10	4	0	7	0	10	1	10	2	7	3	5	0	0	1	8	0	3	3	3
Nutsedge	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Redroot pigweed	0	2	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	9
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	2	1	3	4	1	0	4	4	4	4	5	5	0	0	0	0	3	1	1	1	4
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Wild oats	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 125 g/ha	501	504	505	506	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525
Postemergence																						
B. signalgrass	6	3	3	0	0	0	4	0	1	3	0	0	0	4	7	0	0	0	5	0	0	2
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	8	-	-	-	-	-	8	-	-	-	6	-	7	-	-	-	-	0	0	-	-
Blackgrass	6	7	4	0	3	5	5	0	3	4	3	0	4	3	7	0	0	2	8	0	2	6
Cocklebur	0	3	0	0	1	0	3	0	2	3	1	3	3	0	0	0	0	0	3	2	0	2
Corn	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0
Crabgrass	8	8	7	3	9	9	8	3	2	4	9	8	9	7	2	2	3	4	8	8	8	-

Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	9	8	-	8	7	6	3	3	5	9	9	5	8	0	4	4	8	8	2	8	8
Morningglory	3	4	5	0	3	-	5	4	5	3	7	2	3	2	5	0	4	4	4	3	2	2
Nutsedge	0	0	2	0	-	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	-	0
Rape	2	4	0	0	5	0	4	1	0	4	6	4	4	0	7	0	0	0	0	0	0	0
Redroot pigweed	4	8	0	0	7	0	7	6	7	6	2	4	-	4	0	0	3	0	4	2	0	2
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	3	6	2	2	4	3	7	4	4	7	7	4	4	6	5	3	4	4	6	5	-	5
Sugarbeets	5	7	5	6	1	0	4	0	0	4	3	3	0	0	3	0	0	0	6	0	0	0
Velvetleaf	0	4	0	0	1	4	4	1	0	3	2	4	4	0	2	2	4	0	5	3	0	3
Wheat	-	3	2	0	0	0	0	0	0	5	0	0	1	0	0	0	0	0	0	0	0	2
Wild oats	0	6	2	0	0	0	0	0	0	4	0	0	2	0	2	0	0	0	4	0	0	2
Table B									COMPOUND													
Rate 125 g/ha	526	527	528	531	532	533	534	535	536	540	541	543	544	545	546	548	549	550	551	552	553	554
Postemergence																						
B. signalgrass	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	0	0	0	-	-	-	0	3	-	0	2	0	9	4	0	0	0	5	2	5
Blackgrass	6	3	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	7	0	0	3
Cocklebur	0	0	0	0	0	2	0	0	0	0	0	0	3	3	0	0	0	0	0	0	-	0
Corn	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	9	4	9	8	4	8	5	-	5	5	0	-	8	2	7	5	3	7	6	9	3	-
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	3	8	3	8	4	8	3	-	0	0	0	0	0	0	-	0	2	6	-	3	7	6
Morningglory	6	3	3	4	3	4	2	2	2	4	1	2	4	4	4	-	4	1	2	1	0	2
Nuts dge	0	-	0	0	0	0	2	0	0	0	0	0	0	-	-	0	0	0	-	0	0	0
Rape	4	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	3	7	6	6	0
Redroot pigweed	0	0	0	0	0	9	3	0	0	0	0	0	0	0	-	0	0	0	0	0	0	5
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	3	4	3	3	2	4	4	6	4	1	0	2	2	1	1	2	2	2	2	3	2	2
Sugarbeets	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	0
Velvetleaf	4	2	4	0	0	4	2	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576
Postem rgence																						
B. signalgrass	0	2	2	-	9	3	0	-	4	-	0	8	0	4	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	9	0	-	0	0	-	-	-	0	-	0	-	0	2	-	-	-	-	-	-	-	-
Blackgrass	2	3	0	0	7	5	5	3	0	4	0	2	0	8	0	0	0	0	0	6	0	0
Cocklebur	0	0	0	0	0	0	0	2	0	0	0	2	0	1	2	0	0	0	0	2	0	0
Corn	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	2	5	0	4	4	3	5	9	3	0	8	7	8	0	0	0	0	9	2	2	3
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	7	6	2	9	7	4	7	8	3	0	8	0	9	3	0	0	0	3	7	2	3
Morningglory	2	2	8	10	10	7	4	4	6	7	5	5	4	10	10	10	10	3	10	10	6	2
Nutsedge	0	0	0	0	0	3	2	-	0	-	0	0	-	0	0	0	0	0	0	-	0	0
Rape	5	0	0	0	0	-	4	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0
Redroot pigweed	0	3	0	0	0	5	0	9	0	3	0	5	0	0	0	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	0	0	3	4	2	5	3	5	5	3	4	4	5	5	0	2	3	2	4	5	2
Sugarbeets	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Velvetleaf	0	0	0	0	0	0	0	5	0	0	3	3	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	2	0	2	4	0	0	0	0	0	2	0	0	0	0	0	2	0	0
Wild oats	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Table B	COMPOUND																					
Rate 125 g/ha	577	578	579	580	581	582	584	585	586	587	588	589	590	591	592	593	594	595	596	598	599	600
Postemergence																						
B. signalgrass	0	0	0	2	5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	4	8	0	-	8	7	5	8	0	-	-	-	-	-	-	-	-	-	-	0	-	-
Blackgrass	0	0	0	6	4	-	7	6	1	3	0	0	0	0	0	0	5	7	0	0	0	0
Cocklebur	0	0	0	3	-	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	2	6	3	7	0	7	5	3	0	2	0	0	0	0	0	7	8	0	0	0	1
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	2	4	2	6	8	4	8	6	2	0	4	0	0	0	0	0	7	9	0	0	0	0
Morningglory	9	10	10	7	8	10	4	8	10	4	7	3	3	0	1	0	2	2	0	0	1	0

Nutsedge	-	-	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
Rape	0	2	0	6	7	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	-	0
Redroot pigweed	0	3	0	5	8	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	3	2	4	4	3	3	0	3	4	4	3	1	1	1	0	0	-	2	0	2	2
Sugarbeets	0	0	0	4	5	0	2	2	0	0	0	0	0	0	0	0	5	3	0	0	0	0
Velvetleaf	0	2	0	2	4	0	3	3	0	0	0	2	0	0	0	0	3	4	0	0	0	0
Wheat	0	0	0	0	4	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B								COMPOUND														
Rate 125 g/ha	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622
Postemergence																						
B. signalgrass	0	2	0	0	0	0	0	10	1	6	3	3	3	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	3	-	-	-	-	0	-	0	-	-	-	-	0	0	0	-	-	-	-	0	-
Blackgrass	-	6	0	0	0	0	4	6	8	9	9	9	9	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	1	1	2	0	2	0	0	0	0	-	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	4	4	0	-	0	3	-	3	9	9	8	8	9	1	0	2	0	0	0	2	3	2
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	7	8	0	2	0	0	6	7	9	7	8	9	9	0	0	3	0	0	0	0	0	3
Morningglory	1	1	0	1	6	10	8	7	10	8	8	8	7	2	1	0	0	0	1	-	2	1
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	2	0	5	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	2	2	0	0	0	0	0	5	0	2	2	2	2	0	0	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	3	0	1	2	2	4	4	6	7	7	5	5	3	1	-	1	0	1	1	5	4
Sugarbeets	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	3	3	3	3	4	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	1	0	0	-	0	1	0	2	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	1	0	0	4	0	3	2	6	7	0	0	0	0	0	0	0	0	0

Table B								COMPOUND														
Rate 125 g/ha	623	624	625	627	628	629	630	631	632	633	634	635	636	638	639	640	641	642	643	644	645	646
Postemergence																						

B. signalgrass	0	7	0	7	8	1	0	3	0	0	0	0	0	4	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	0	-	-	5	-	-	0	0	0	7	7	-	-	-	-	-	-	-	-	-
Blackgrass	3	5	2	8	8	8	0	8	4	0	6	3	0	4	0	4	0	0	0	0	0	0
Cocklebur	0	0	0	0	1	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0
Corn	0	0	0	3	6	3	0	5	3	0	0	0	2	2	0	0	0	0	0	0	0	0
Crabgrass	0	7	0	8	-	3	5	9	6	0	3	9	9	5	-	2	0	0	0	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	8	3	-	9	8	7	9	7	0	8	8	7	6	0	0	0	0	0	0	0	0
Morningglory	6	1	1	6	2	2	2	4	1	2	1	4	2	2	3	3	1	0	4	0	0	0
Nutsedge	0	0	0	-	-	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	5	6	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	3	3	-	0	0	0	0	2	0	0	0	4	0	0	0	0	3	2	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	0	3	2	4	-	6	-	5	2	2	2	4	2	1	0	0	0	2	1	0	1	1
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	4	6	5	4	4	0	0	0	0	3	2	0	0	0	0	0	0	0	0
Wheat	0	0	0	3	4	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Wild oats	0	0	0	2	3	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0

Table B

	COMPOUND																					
Rate 125 g/ha	647	648	649	650	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	670
Postemergence																						
B. signalgrass	6	0	0	0	0	0	0	0	2	2	0	5	0	0	0	0	0	0	4	4	2	7
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	0	-	-	-	-	-	-	-	-	-	0	0	0	-	-	-	-	0	-	0	-
Blackgrass	-	0	0	0	0	0	0	0	7	8	3	6	0	0	0	0	7	7	8	8	8	4
Cockl bur	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	3	0	2
Corn	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	4
Crabgrass	9	0	2	1	0	0	0	8	0	8	2	6	1	2	0	0	1	7	9	8	9	8
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	0	2	2	3	0	2	7	9	8	3	7	4	3	0	0	6	4	8	9	9	9
Morningglory	0	10	7	10	3	1	4	-	2	5	7	10	4	0	7	0	2	6	1	2	3	3
Nutsedge	0	0	0	2	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4
Rape	0	0	0	0	-	0	0	2	0	2	0	0	0	0	0	0	0	0	0	4	3	2
Redroot pigweed	4	3	0	6	0	0	0	2	0	2	6	0	2	0	0	0	2	3	1	5	5	7

Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	3	2	2	4	0	0	0	2	2	1	4	3	3	1	1	0	4	2	4	3	2	2
Sugarbeets	2	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Velvetleaf	5	0	0	0	0	0	0	0	0	3	0	3	2	0	0	0	0	2	2	6	0	5
Wheat	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	0	0	0	4	0	0

Table B	COMPOUND																					
Rate 125 g/ha	671	672	674	675	676	677	678	679	680	681	708	709	710	711	712	713	714	722	736	739	740	741
Postemergence																						
B. signalgrass	1	3	5	4	4	0	0	0	0	0	0	0	5	6	0	3	2	0	0	2	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	-	-	1	-	-	0	0	0	0	0	-	1	-	-	-	3	-	-	3	0	0
Blackgrass	6	2	7	5	6	0	0	0	0	0	0	0	6	7	0	3	7	0	0	3	3	0
Cocklebur	0	1	0	3	0	0	0	0	0	0	0	0	0	1	0	2	2	0	0	2	0	0
Corn	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0
Crabgrass	1	6	8	8	7	0	0	0	0	0	0	3	9	8	4	9	9	0	3	9	0	-
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	5	5	9	9	8	0	0	0	0	0	2	4	8	8	8	9	6	2	2	9	7	0
Morningglory	1	8	2	2	2	2	6	0	1	0	2	0	4	2	4	3	-	9	6	-	3	1
Nutsedge	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0
Rape	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0	0	0	0	0
Redroot pigweed	1	-	3	2	2	2	0	0	0	0	0	5	8	7	-	-	8	-	2	3	2	7
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	2	3	5	3	0	1	0	0	0	4	3	4	4	5	4	4	0	3	3	3	2
Sugarbeets	0	0	0	2	0	0	0	0	0	0	0	0	0	2	3	0	6	0	0	3	0	0
Velvetleaf	0	6	6	2	3	0	0	0	0	0	0	4	6	5	5	6	2	0	2	0	0	0
Wheat	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	2	2	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	743	744	745	746	747	748	749	750	751	752	753	754	756	757	758	759	760	761	762	763	764	765
Postemergence																						
B. signalgrass	0	2	0	4	3	2	2	2	3	0	0	2	0	0	5	3	0	0	0	3	0	7
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	-	-	7	8	6	-	-	5	0	-	0	0	0	7	-	-	0	0	0	5	-

Blackgrass	5	5	3	7	7	6	5	7	6	2	2	4	0	0	6	5	0	0	0	5	6	5
Cocklebur	0	0	0	2	0	0	2	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	5	4	4	9	9	3	8	9	8	3	4	5	0	4	3	4	6	-	0	5	6	5
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	7	8	2	8	9	6	5	8	9	9	8	8	0	2	9	5	7	0	0	8	7	8
Morningglory	3	2	3	8	9	6	3	3	8	2	2	10	7	6	4	3	3	6	2	7	1	6
Nutsedge	2	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	2	0	4	4	3	2	4	3	2	0	0	0	0	0	0	1	0	-	0	0	0
Redroot pigweed	0	0	2	5	4	4	4	7	6	5	5	0	0	3	8	0	0	-	0	0	5	7
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	0	3	3	3	4	3	4	6	3	5	4	0	2	4	4	3	4	3	2	2	3	3
Sugarbeets	0	0	2	0	0	2	3	3	3	3	0	0	0	0	0	0	0	3	5	0	0	0
Velvetleaf	0	0	0	6	4	0	3	3	2	0	0	0	0	2	6	5	0	0	0	0	1	6
Wheat	0	0	0	4	0	0	0	0	0	5	0	3	0	0	0	0	0	0	0	0	3	0
Wild oats	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

Table B

	COMPOUND													
Rate 125 g/ha	766	767	772	773	774	775	776	777	778	779	780	790	791	792
Postemergence														
B. signalgrass	2	2	0	0	0	2	0	2	2	3	5	6	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	7	0	0	0	0	3	0	0	0	0	0	-	7
Blackgrass	5	9	0	0	0	0	2	0	4	0	2	5	2	7
Cocklebur	0	2	0	0	0	0	0	0	0	0	0	0	0	1
Corn	0	0	0	0	0	0	0	0	0	0	0	2	0	1
Crabgrass	6	8	0	0	0	3	2	4	3	4	4	-	4	9
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	8	0	0	0	7	2	8	8	9	8	9	2	9
Morningglory	2	5	0	0	0	5	7	8	4	6	4	4	3	7
Nutsedge	3	0	0	0	0	0	0	-	0	0	0	0	0	0
Rape	0	-	0	0	0	0	2	0	2	0	0	0	3	3
Redroot pigweed	6	9	0	0	0	3	2	2	3	2	0	5	6	6
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	2	0	0	0	5	2	3	3	2	3	3	4	5

Sugarbeets	0	3	0	0	0	0	0	3	0	3	0	0	0	1
Velvetleaf	3	2	0	0	0	2	3	2	3	2	2	4	2	5
Wheat	0	0	0	0	0	0	0	1	2	0	0	4	0	0
Wild oats	0	0	0	0	0	0	0	1	2	0	0	0	0	0

Table B	COMPOUND																												
Rate 125 g/ha	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Preemergence																													
B. signalgrass	0	0	0	7	3	0	0	0	0	5	0	0	0	0	0	0	4	0	2	0	0	2	0	4	0	0	0	0	0
Bedstraw	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	0	0	6	3	0	0	0	0	4	0	0	0	0	0	0	2	0	2	1	0	4	1	1	3	0	0	0	0
Cocklebur	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0
Corn	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	4	0	0	10	3	7	7	-	3	7	0	0	2	0	2	2	6	5	5	2	7	4	3	6	8	0	0	7	4
Giant foxtail	7	6	0	9	7	3	2	5	0	6	0	0	3	9	8	2	7	5	2	5	8	4	2	7	7	0	0	5	1
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	5	6	5	0	4	0	0	0	0	0	0	0	0	10	7	0	2	6	2	0	6	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	3	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0

Table B	COMPOUND																												
Rate 125 g/ha	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	51	52	53	54	55	56	57	58	59
Preemergence																													
B. signalgrass	0	0	0	0	1	0	8	0	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	3	2	2	0	5	2	5	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	-	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	9	9	6	3	7	3	9	0	5	3	4	4	0	0	0	1	4	2	6	7	0	1	5	2	0	0	0	0	0
Giant foxtail	3	8	8	6	6	7	10	0	10	0	9	9	0	0	0	10	10	2	9	8	2	5	3	3	0	0	0	0	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Redroot pigweed	0	0	0	0	2	0	0	0	10	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	2	2	0	2	0	0	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																												
Rate 125 g/ha	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	85	86	87	88	89
Preemergence																													
B. signalgrass	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	2	2	0
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	2	0	4	2	2	4	0	0	0	3	3	4	0
Cocklebur	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	1	4	3	0	0	2	2	4	3	0	0	0	0	5	2	8	4	2	9	7	3	4	0	0	0	8	8	7	0
Giant foxtail	3	7	5	0	0	4	4	7	9	0	0	0	0	7	7	9	9	0	8	8	8	7	0	0	0	9	9	6	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	2	0	0	0	4	7	0	0	0	0	4	4	10	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	3	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	0	0	0	0	2	0

Table B	COMPOUND																							
Rate 125 g/ha	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113
Preemergence																								
B. signalgrass	0	10	-	7	1	0	0	2	0	0	0	0	0	5	0	1	0	7	6	9	7	1	0	9
Bedstraw	0	1	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	7	5	10	4	0	0	6
Blackgrass	0	10	10	10	1	2	3	1	6	3	0	0	0	0	3	7	0	10	7	8	3	0	0	9
Cocklebur	0	0	-	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Corn	0	6	2	7	2	0	0	0	0	0	0	0	0	0	0	0	0	7	0	3	3	1	0	4
Crabgrass	2	10	10	9	3	6	4	0	7	8	0	0	0	6	0	8	0	10	9	10	3	7	6	10
Giant foxtail	8	10	10	10	9	4	2	3	8	10	0	0	4	9	4	10	5	10	10	10	10	9	10	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	2	2

Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	8	9	7	0	0	0	0	0	0	0	0	0	0	0	1	0	8	0	8	1	0	0	7
Redroot pigweed	0	9	7	8	0	6	6	-	4	0	0	0	0	0	0	3	0	10	3	10	6	6	2	8
Soybean	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	7	5	4	0	8
Sugarbeets	0	7	6	7	0	1	0	3	0	2	0	0	0	0	0	1	0	7	3	10	1	0	0	8
Velvetleaf	0	6	6	6	0	0	0	0	0	0	0	0	0	0	0	4	0	10	4	7	5	0	2	7
Wheat	0	4	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	4
Wild oats	0	9	8	8	3	0	0	2	0	3	0	0	0	0	2	3	0	9	9	10	3	0	0	10

Table B	COMPOUND																					
Rate 125 g/ha	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
Preemergence																						
B. signalgrass	0	2	8	9	2	7	3	4	0	0	0	0	0	0	0	2	9	8	3	5	2	0
Bedstraw	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0
Blackgrass	8	0	9	8	2	8	3	4	0	0	0	0	0	0	0	0	9	10	6	3	0	0
Cocklebur	0	0	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	3	5	0	0	0	0
Crabgrass	7	4	10	10	9	-	6	7	4	5	0	0	0	0	0	7	9	7	7	3	6	0
Giant foxtail	9	9	10	10	10	10	9	8	9	9	0	0	0	0	0	7	9	10	8	7	9	0
Morningglory	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	3	0	9	10	0	6	0	0	0	0	0	0	0	0	0	0	9	10	0	0	0	0
Redroot pigweed	8	5	10	10	0	10	8	7	5	4	0	0	0	0	0	2	10	10	6	0	0	3
Soybean	0	0	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
Sugarbeets	6	0	10	8	0	4	2	3	0	3	0	0	0	0	0	3	9	8	5	2	2	0
Velvetleaf	4	0	9	8	0	4	0	0	0	0	0	0	0	0	0	0	8	8	4	0	0	0
Wheat	0	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	3	8	0	0	0	0
Wild oats	7	0	7	6	1	6	2	0	0	2	0	0	0	0	0	5	8	10	5	2	0	0

Table B	COMPOUND																					
Rate 125 g/ha	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157
Preemergence																						
B. signalgrass	3	5	4	2	0	0	0	0	0	0	9	7	5	0	0	-	4	0	0	0	0	0
Bedstraw	0	7	7	0	0	0	0	0	0	0	9	2	0	0	0	0	0	0	0	0	0	0
Blackgrass	4	9	9	6	0	0	0	5	1	1	10	8	4	0	0	9	0	0	0	0	0	0
Cocklebur	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
Corn	0	0	3	0	0	0	0	0	0	0	5	7	0	0	0	0	0	0	0	0	0	0
Crabgrass	4	10	9	10	6	0	2	7	7	4	8	8	8	0	1	10	0	0	0	0	4	2

Giant foxtail	4	9	9	10	8	0	4	9	6	3	10	8	9	0	0	10	0	0	0	0	2	6
Morningglory	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	4	9	0	0	0	0	3	0	0	10	7	0	0	0	8	0	0	0	0	0	0
Redroot pigweed	8	10	10	8	0	0	0	0	0	0	10	8	9	0	8	10	0	0	7	0	4	0
Soybean	0	0	4	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Sugarbeets	4	10	10	3	0	0	0	1	0	0	9	2	6	0	0	8	0	0	0	0	0	0
Velvetleaf	0	6	8	3	0	0	0	0	0	0	7	4	6	0	0	8	0	0	0	0	0	0
Wheat	0	4	5	0	0	0	0	0	0	0	2	6	3	0	0	2	0	0	0	0	0	0
Wild oats	0	8	9	7	0	0	0	5	2	0	10	6	6	0	0	9	0	0	0	0	0	0

Table B								COMPOUND														
Rate 125 g/ha	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179
Preemergence																						
B. signalgrass	0	0	0	0	2	2	0	4	0	5	2	7	9	1	5	0	0	0	0	0	7	8
Bedstraw	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Blackgrass	0	0	0	-	2	7	0	3	0	0	1	3	10	0	0	0	2	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Crabgrass	3	0	0	8	8	-	0	7	4	8	3	8	10	7	8	6	8	6	8	6	2	7
Giant foxtail	4	0	0	9	7	8	0	7	5	9	8	10	10	7	9	9	9	7	6	3	4	9
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	2	0	0	0	0	0	0	2	8	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	-	0	0	0	6	0	6	10	0	6	0	6	0	0	0	0	7
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	3	0	4	0	2	0	0	8	0	2	2	3	0	0	0	0	0
Velvetleaf	0	0	0	0	0	2	0	1	0	0	0	2	7	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	2	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	3	0	4	0	0	0	8	9	2	0	0	0	0	0	0	0	0

Table B								COMPOUND														
Rate 125 g/ha	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201
Preemergence																						
B. signalgrass	0	0	0	0	5	0	0	0	0	-	0	0	0	0	0	0	0	0	0	1	0	0
Bedstraw	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-	0
Blackgrass	0	0	0	0	3	0	0	0	0	4	0	0	5	0	2	1	0	0	0	10	5	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	5	6	6	0	0	0	0	3	6	4	9	4	0	0	0	6	2	5
Giant foxtail	0	0	0	0	9	5	9	0	2	0	0	8	9	4	8	3	0	0	0	10	4	6
Morningglory	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	-	0	0	0	0	-	0	0	0	-	-	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	0	0	2	0	7	0	0	0	0	7	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	2

Table B									COMPOUND													
Rate 125 g/ha	202	203	204	205	206	207	208	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224
Preemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	4	6	7	5	0	0	3
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4	4	0	0	0
Blackgrass	0	0	2	0	0	0	0	0	9	4	0	-	6	2	6	9	10	9	7	0	1	2
Cocklebur	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
Crabgrass	4	0	8	0	0	0	5	0	0	4	0	0	4	3	4	4	8	7	8	6	6	5
Giant foxtail	6	0	9	0	3	6	8	0	4	4	2	3	3	6	8	9	10	9	9	5	9	7
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Nutsedge	-	0	0	-	0	0	0	0	-	0	0	-	0	0	0	-	-	-	0	0	0	-
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	9	4	0	4	0	5	1	4	2	10	0	0	0
Soybean	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	5	0	0	2	0	0	1	4	6	4	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	-	0	0	0	0	1	0	6	3	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	7	2	0	0	0
Wild oats	0	0	0	0	0	0	0	0	4	-	0	0	0	0	0	6	5	5	2	0	0	0

Table B									COMPOUND													
Rate 125 g/ha	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246
Preemergence																						
B. signalgrass	7	6	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	9	5	0	7	2
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	2	0

Blackgrass	10	10	5	0	0	0	0	6	2	0	0	2	0	0	3	0	6	10	10	0	10	5
Cocklebur	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	2	0
Corn	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5	0
Crabgrass	10	9	10	0	0	1	0	7	6	0	0	3	0	6	7	4	7	10	8	0	9	3
Giant foxtail	10	10	10	6	0	2	0	8	7	0	0	7	0	6	10	5	10	10	10	0	9	9
Morningglory	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	1	0
Nutsedge	7	-	0	0	0	0	0	0	-	-	-	-	-	0	0	-	0	10	0	0	-	-
Rape	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	5	0	4	2
Redroot pigweed	7	0	5	0	0	0	0	0	6	0	0	0	0	0	0	0	0	10	9	0	10	0
Soybean	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
Sugarbeets	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	3	0	8	1
Velvetleaf	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	8	6	0	7	2
Wheat	6	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	8	0	6	0
Wild oats	7	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	9	6	0	5	3

Table B	COMPOUND																					
Rate 125 g/ha	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268
Preemergence																						
B. signalgrass	0	0	0	0	3	0	0	0	2	0	0	4	5	0	0	0	0	0	0	0	0	0
Bedstraw	0	0	-	0	0	0	0	0	0	0	0	3	10	0	-	0	0	0	0	3	0	0
Blackgrass	0	0	0	0	8	2	0	0	10	0	0	8	10	0	0	0	0	0	-	8	2	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	4	7	2	0	0	3	2	2	7	4	2	3	2	0	2	2	1	0	0
Giant foxtail	0	0	0	8	10	9	0	3	9	5	6	9	9	7	8	3	9	7	8	4	8	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	-	0	0	-	-	-	-	0	-	-	0	-	0	0	0	0	0	-	-	0	0	0
Rape	0	0	0	0	9	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	3	5	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	3	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	10	3	0	2	3	0	0	2	0	0	0	0	0	0	0	5	0	0
Velvetleaf	0	0	0	0	4	0	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	6	0	0	0	2	0	0	4	2	0	0	0	0	4	0	2	0	0

Table B	COMPOUND																					
Rate 125 g/ha	269	270	271	272	273	274	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291
Preemergence																						

B. signalgrass	6	0	8	0	0	0	7	9	0	0	0	0	1	10	5	5	3	10	4	7	0	3
Bedstraw	0	0	10	0	0	0	0	0	0	0	0	3	-	0	8	0	0	10	2	4	3	0
Blackgrass	2	0	9	0	0	0	6	9	0	0	0	1	1	8	4	4	0	10	2	9	2	8
Cocklebur	-	0	0	0	0	0	0	0	0	-	0	-	0	0	-	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	2	0	5	0	6	0	4	4	1	0	0	10	1	7	4	8	2	9	2	3	3	0
Giant foxtail	6	0	10	5	8	3	10	10	2	3	0	9	8	9	9	9	10	10	9	10	9	9
Morningglory	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	0	0	6	0	0	-	0
Rape	0	0	4	0	0	0	0	1	0	0	0	0	0	-	2	0	0	8	0	8	0	0
Redroot pigweed	0	0	8	0	0	0	0	0	0	0	0	0	6	6	6	2	0	8	0	6	7	0
Soyb an	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
Sugarb ets	0	0	6	0	0	0	1	1	0	0	0	0	0	0	5	0	0	6	0	6	5	0
Velvetleaf	0	0	4	0	0	0	0	1	0	0	0	0	0	2	0	2	0	7	0	6	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	2	0	0
Wild oats	2	0	5	0	0	0	2	7	0	0	0	0	2	1	0	0	0	8	2	8	4	0

Table B COMPOUND

Rate 125 g/ha Preem rgence	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313
B. signalgrass	0	3	7	6	0	0	0	9	0	0	0	0	0	0	0	0	0	0	4	0	0	0
Bedstraw	0	0	0	0	0	0	0	10	-	0	0	0	0	-	0	0	0	0	3	0	0	-
Blackgrass	0	7	3	10	0	0	-	10	0	0	0	0	0	0	0	0	0	0	10	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	3	9	7	0	2	0	9	2	0	0	0	4	4	0	0	0	1	5	0	0	0
Giant foxtail	0	9	9	10	0	0	0	10	5	0	6	0	4	8	2	8	0	9	10	0	0	0
Morningglory	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0
Rape	0	6	0	2	0	0	0	8	0	0	0	0	0	0	0	0	0	0	6	0	0	0
Redroot pigweed	0	8	0	6	0	0	0	10	0	0	0	0	0	0	0	0	0	0	10	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	4	0	0	0	0	0	8	0	0	0	0	1	0	0	0	0	0	7	0	0	0
Velvetleaf	0	4	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Wheat	0	7	0	3	0	0	0	7	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Wild oats	0	2	0	8	0	0	0	7	0	0	0	0	0	0	0	0	0	0	9	0	0	0

Table B COMPOUND

Rate 125 g/ha	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335
Preemergence																						
B. signalgrass	2	2	7	6	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bedstraw	0	-	0	-	0	0	-	-	0	0	0	0	-	-	0	0	0	-	0	0	0	0
Blackgrass	7	7	10	8	0	0	2	6	0	0	0	1	5	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	3	5	8	7	0	0	3	2	2	0	0	0	0	2	0	0	0	0	0	0	0	0
Giant foxtail	6	9	10	10	0	7	-	8	9	0	0	7	2	8	5	0	0	-	1	0	0	4
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	-	-	0	-	0	0	0	0	0	0	0	0	-	0	0	-	0	0	0	0	0	0
Rape	-	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	2	0	6	7	0	0	0	0	6	0	0	0	3	0	0	0	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	2	0	0	4	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	2	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Wild oats	2	0	4	8	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Table B

	COMPOUND																					
Rate 125 g/ha	336	337	338	339	340	341	342	343	344	345	348	349	350	351	352	353	354	355	356	357	358	359
Preemergence																						
B. signalgrass	0	0	0	0	0	0	0	4	0	0	3	-	0	0	6	2	5	2	3	3	3	0
Bedstraw	0	0	0	0	0	0	0	-	0	0	-	-	10	-	0	0	0	-	0	10	9	0
Blackgrass	0	0	0	0	2	2	3	8	0	0	6	2	5	2	10	-	4	4	6	8	8	0
Cocklebur	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	3	0	0	0	0	0	0
Crabgrass	0	0	0	0	3	2	6	9	0	0	7	6	8	10	10	9	9	10	8	9	10	0
Giant foxtail	0	0	0	3	10	9	9	10	2	0	10	9	10	10	10	10	10	10	10	10	10	0
Morningglory	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	2	2	0	0
Redroot pigweed	0	0	0	0	0	0	0	10	0	0	0	0	10	10	3	10	7	7	4	10	9	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	2	2	2	3	2	0	0	0	3	1	0
Velvetleaf	0	0	0	0	0	0	0	6	0	0	3	0	2	3	4	1	5	2	2	5	4	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0

Wild oats	0	0	0	0	0	0	0	4	0	0	4	0	3	0	8	1	4	0	7	10	5	0

Table B	COMPOUND																					
Rate 125 g/ha	360	361	362	363	364	365	367	368	369	370	371	372	373	374	375	376	378	379	380	381	382	383
Preemergence																						
B. signalgrass	6	4	6	3	0	0	0	6	0	0	2	4	0	0	0	0	0	0	0	0	0	0
Bedstraw	-	0	9	9	0	0	10	2	-	3	-	2	0	0	10	-	0	0	-	0	-	-
Blackgrass	9	8	10	10	0	0	7	9	0	8	9	6	3	2	5	0	0	0	0	0	1	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	3	0	3	0	0	0	0	6	0	2	0	2	0	0	2	0	0	0	0	0	0	0
Crabgrass	10	7	8	7	0	0	9	10	7	8	10	9	7	6	8	0	3	0	7	0	7	8
Giant foxtail	10	9	10	10	6	0	10	10	9	10	10	10	8	9	10	0	4	1	8	0	9	7
Morningglory	5	0	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	-	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	5	3	1	0	0	3	0	0	0	4	5	0	0	2	0	0	0	0	0	0	0
Redroot pigweed	5	7	10	3	0	0	10	10	4	7	10	10	3	0	10	0	0	0	3	0	0	0
Soybean	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	6	2	7	4	0	0	4	8	0	3	6	4	0	0	2	0	0	0	0	0	0	0
Velvetleaf	6	0	6	5	0	0	3	7	0	4	4	5	0	0	3	0	0	0	0	0	0	0
Wheat	6	0	8	5	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	10	8	10	9	0	0	3	9	0	0	3	7	0	0	4	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	384	385	387	388	389	390	391	392	393	394	395	396	397	398	400	401	402	403	404	405	406	407
Preemergence																						
B. signalgrass	0	0	0	2	0	5	0	3	0	5	0	0	6	2	0	0	3	4	4	0	0	0
Bedstraw	-	-	0	-	-	0	-	8	-	-	0	-	-	-	-	0	3	0	-	-	0	0
Blackgrass	0	0	0	1	2	9	0	8	0	8	0	0	9	8	0	0	7	7	7	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	-	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	2	2	0	0	0
Crabgrass	6	9	6	8	2	9	0	10	2	10	0	7	10	10	9	2	9	10	10	1	0	2
Giant foxtail	10	10	3	8	8	10	0	10	9	10	0	10	10	10	9	6	10	10	10	8	0	6
Morningglory	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Nutsedg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	2	0	0	0	2	0	0	9	3	0	0	1	1	4	0	0	0
Redroot pigweed	0	7	0	0	0	9	0	7	2	2	0	0	8	5	4	0	2	4	6	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	1	0	2	0	7	0	3	2	3	0	0	4	4	0	0	0	1	3	0	0	0

Velvetleaf	0	0	0	2	0	4	0	3	0	5	0	0	2	2	0	0	0	0	1	0	0	0
Wheat	0	0	0	2	0	4	0	3	0	1	0	0	0	0	0	0	0	0	2	0	0	0
Wild oats	0	2	2	6	0	6	0	9	0	6	0	0	5	3	0	0	4	4	8	0	0	0
Table B									COMPOUND													
Rate 125 g/ha	408	409	410	411	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431
Preemergence																						
B. signalgrass	2	4	5	3	0	3	7	3	3	0	2	8	0	0	0	8	4	0	0	0	2	0
Bedstraw	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	9	7	8	7	0	5	9	-	4	0	8	10	0	0	0	9	6	0	0	0	3	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	2	8	0	2	0	2	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Crabgrass	10	9	9	10	7	8	10	9	8	1	9	8	0	0	0	10	9	9	7	10	10	-
Giant foxtail	10	10	9	10	9	10	10	9	8	1	9	10	0	0	0	10	9	8	7	10	10	0
Morningglory	0	2	0	1	0	0	4	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	8	0	6	9	0	0	0	0	10	0	0	0	2	0	0	0	0	0	0
Redroot pigweed	6	8	0	8	0	0	9	0	3	0	2	10	0	0	0	0	4	0	0	0	0	0
Soybean	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Sugarbeets	4	7	0	8	0	0	4	0	2	0	0	10	0	0	0	0	3	0	0	0	0	0
Velvetleaf	1	5	4	5	0	2	3	0	3	0	2	9	0	0	0	0	2	0	0	0	2	0
Wheat	0	8	3	4	0	0	4	0	0	0	0	4	0	0	0	2	0	0	0	0	0	0
Wild oats	2	5	6	5	0	3	7	0	0	0	2	7	0	0	0	4	7	0	0	0	0	0
Tabl B									COMPOUND													
Rate 125 g/ha	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453
Preemergence																						
B. signalgrass	0	2	0	0	0	0	0	0	4	0	0	0	0	0	6	0	0	0	1	0	0	2
Bedstraw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
Blackgrass	0	2	0	0	0	0	0	0	6	0	0	0	0	0	7	0	0	0	2	0	0	0
Cockl bur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	5	10	0	2	0	0	6	0	7	0	8	6	5	2	8	3	4	3	7	0	5	6
Giant foxtail	2	10	0	2	0	0	7	0	6	0	0	4	9	0	10	3	2	6	8	0	3	9
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	4	0	2	0	0	2	0	4	0	0	0	10	2	10	0	0	0	4	0	0	4

Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Velvetleaf	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Wild oats	0	6	0	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	454	455	456	457	458	459	460	461	462	463	465	466	467	468	469	470	471	472	473	474	476	477
Preemergence																						
B. signalgrass	0	3	0	0	4	0	0	0	0	0	2	3	0	2	7	0	9	9	0	2	0	2
Bedstraw	-	-	-	-	-	0	0	-	0	-	-	2	0	-	-	-	-	-	-	-	0	-
Blackgrass	0	4	2	0	8	0	0	0	0	0	3	5	2	4	8	0	10	9	0	3	0	1
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	-	0	0	0	0	0
Corn	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Crabgrass	3	5	6	0	6	7	1	0	0	0	-	9	6	9	10	7	10	9	2	9	0	8
Giant foxtail	9	10	10	0	9	9	6	0	0	0	10	10	7	8	10	0	10	10	3	10	0	6
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	3	0	0	0	0	0	0	0	0	2	0	7	0	2	0	2	0	0	0	0	0
Redroot pigweed	2	10	2	0	3	0	0	0	0	5	9	7	7	4	10	0	10	10	10	3	0	1
Soybean	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Sugarb ets	0	1	2	0	0	0	0	0	0	0	2	0	1	0	8	0	2	2	0	0	0	0
Velvetleaf	0	4	0	0	0	0	0	0	0	0	3	0	0	0	5	0	3	3	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Wild oats	0	3	0	0	2	0	0	0	0	0	0	0	0	0	7	0	4	5	0	3	0	5

Table B	COMPOUND																					
Rate 125 g/ha	478	479	480	481	482	483	485	486	487	488	489	490	492	493	494	495	496	497	498	499	500	501
Preemergence																						
B. signalgrass	6	5	4	9	0	0	5	5	3	7	7	5	0	0	0	0	0	0	0	0	9	9
Bedstraw	8	-	-	0	-	0	-	-	-	-	-	-	0	0	0	-	0	-	-	0	9	9
Blackgrass	8	6	5	6	0	0	8	9	3	8	8	8	0	0	0	0	0	0	0	0	9	5
Cocklebur	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2
Crabgrass	9	8	8	8	8	0	7	9	9	10	10	9	0	0	0	0	4	0	2	6	9	9
Giant foxtail	10	9	10	9	6	0	8	10	9	10	10	9	0	3	0	0	8	0	2	5	10	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Nutsedge	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	3

Rape	1	0	0	0	0	0	0	2	0	7	0	1	0	0	0	0	0	0	0	0	10	0
Redroot pigweed	8	3	-	0	0	0	6	8	8	10	-	7	0	0	0	0	0	0	0	0	10	10
Soybean	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3	0
Sugarbeets	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	10	3
Velvetleaf	1	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	8	2
Wheat	0	0	0	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6	4
Wild oats	7	4	2	6	0	0	5	3	0	8	4	7	0	0	0	0	0	0	0	0	9	7

Table B	COMPOUND																					
Rate 125 g/ha	502	503	504	505	506	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524
Preemergence																						
B. signalgrass	9	8	10	-	0	7	3	7	0	8	0	6	8	5	0	3	0	0	0	9	8	0
Bedstraw	-	5	5	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	10	0	-
Blackgrass	10	9	8	6	0	3	7	6	0	2	4	2	5	5	2	8	0	0	0	8	4	4
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	8	5	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0
Crabgrass	10	8	6	6	0	9	7	9	6	7	4	7	7	9	4	0	8	9	10	10	10	10
Giant foxtail	10	9	9	9	5	10	9	9	-	9	6	10	10	10	3	0	10	10	10	10	10	9
Morningglory	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0
Nutsedge	-	0	0	10	0	-	0	0	0	-	0	-	0	0	0	0	0	0	0	9	0	0
Rape	3	8	10	4	0	0	0	5	0	0	2	0	4	1	0	0	0	0	0	2	0	2
Redroot pigweed	9	10	10	10	8	8	0	9	6	9	7	8	9	-	9	2	0	0	0	10	9	8
Soybean	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	2	6	6	3	0	1	4	0	0	0	0	5	4	3	0	2	0	0	0	5	4	3
Velvetleaf	5	6	5	2	0	0	6	2	0	0	0	0	0	-	0	0	0	0	0	6	2	3
Wheat	3	2	6	7	0	0	0	0	0	2	2	0	0	0	0	2	0	0	0	0	0	5
Wild oats	9	10	8	2	2	4	2	6	0	2	3	4	5	5	4	6	0	0	0	2	0	9

Table B	COMPOUND																					
Rate 125 g/ha	525	526	527	528	531	532	533	534	535	536	540	541	543	544	545	546	548	549	550	551	552	553
Preemergence																						
B. signalgrass	-	9	2	0	2	0	3	9	0	0	0	0	4	3	0	-	2	0	9	9	8	9
Bedstraw	0	0	-	0	-	-	0	0	0	0	0	0	0	2	0	-	10	0	0	8	0	0
Blackgrass	7	9	2	0	9	0	8	9	0	0	0	0	0	0	0	0	3	4	2	7	0	7
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	9	10	10	9	10	9	10	10	10	0	9	5	4	9	10	7	9	7	10	9	9	9
Giant foxtail	10	10	10	10	10	10	10	9	10	9	9	10	3	10	10	4	9	10	9	10	10	10

Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	4	2	0	0	0	0	6	2	0	0	0	0	0	0	0	0	0	0	3	0	3
Redroot pigweed	0	4	4	0	0	0	8	0	2	0	0	0	7	3	8	3	0	6	9	9	4	7
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	8	6	6	0	4	2	5	4	4	0	0	0	5	0	0	0	0	0	0	6	0	3
Velvetleaf	3	2	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Wild oats	-	9	0	0	0	0	0	8	0	0	2	0	0	0	0	0	0	0	0	3	0	0

Table B	COMPOUND																					
Rate 125 g/ha	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575
Preemergence																						
B. signalgrass	7	-	7	6	0	10	7	4	8	9	6	0	9	0	6	9	0	3	0	7	7	9
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	3	0	0	0	0	0	0
Blackgrass	4	0	9	6	2	10	6	7	10	8	5	0	9	0	8	0	0	2	0	0	0	6
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	3	0	0	3	0	4	0	2	0	4	0	0	0	0	0	0	0
Crabgrass	10	9	9	9	9	10	9	9	8	9	8	0	9	9	7	9	9	2	0	9	9	9
Giant foxtail	9	10	9	9	9	10	10	6	9	9	9	0	10	9	10	9	0	3	0	9	10	10
Morningglory	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Nutsedg	0	0	0	0	0	-	3	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	3	0	0	9	3	2	6	4	0	0	0	0	0	0	0	0	0	2	0	2
Redroot pigweed	-	0	5	0	0	10	8	5	10	9	0	0	9	0	4	9	0	0	0	0	0	9
Soybean	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	5	0	3	0	6	0	0	8	3	2	0	4	0	5	0	0	0	0	2	0	0
Velvetleaf	0	0	2	0	0	4	2	0	0	3	2	0	0	0	6	0	0	0	0	0	0	0
Wheat	3	0	0	0	0	8	5	4	9	8	6	0	6	0	0	0	0	3	0	0	0	0
Wild oats	2	0	0	2	0	9	0	2	9	9	0	0	9	0	5	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	576	577	578	579	580	581	582	584	585	586	587	588	589	590	591	592	593	594	595	596	598	599
Preemergence																						
B. signalgrass	3	3	3	0	6	0	0	7	8	5	0	1	0	0	0	0	0	3	6	0	0	2
Bedstraw	0	0	0	0	4	9	0	-	8	-	0	-	-	-	0	0	-	0	8	0	0	0
Blackgrass	3	0	0	0	3	0	0	-	8	7	3	3	0	0	0	0	0	5	9	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	2	2	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0

Crabgrass	4	9	9	7	6	9	0	8	8	9	6	6	1	0	0	0	0	9	9	0	0	3
Giant foxtail	4	8	9	9	9	10	5	8	6	10	8	8	9	0	0	0	0	9	10	0	0	9
Morningglory	0	0	0	0	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Rape	0	0	0	0	3	0	0	4	8	0	0	0	0	0	0	0	0	0	4	0	0	0
Redroot pigweed	9	0	4	0	10	5	0	8	9	8	0	1	0	0	0	0	0	0	10	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Sugarbeets	0	0	2	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	8	0	0	0
Velvetleaf	0	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0	4	7	0	0	0
Wheat	6	0	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0	0	1	0	0	0
Wild oats	0	0	0	0	0	0	0	2	3	3	2	0	0	0	0	0	0	0	8	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621
Preemergence																						
B. signalgrass	0	7	4	0	0	0	0	7	10	6	8	7	7	8	0	0	0	0	0	0	0	0
Bedstraw	-	0	0	-	-	0	-	-	-	8	-	1	-	-	-	0	0	0	0	-	0	0
Blackgrass	0	8	4	0	0	0	0	7	5	8	9	9	10	8	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	2	3	3	3	3	0	0	0	0	0	0	0	0
Crabgrass	0	9	8	0	0	3	-	8	9	7	10	10	10	10	6	0	0	-	0	1	0	6
Giant foxtail	0	10	9	0	2	10	6	10	10	10	10	10	10	10	4	0	1	9	2	3	0	7
Morningglory	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0
Rape	0	0	0	0	0	0	0	6	5	0	8	3	3	9	0	0	0	0	0	0	0	0
Redroot pigweed	0	10	7	0	0	0	0	7	5	-	10	8	10	10	0	0	1	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	6	6	2	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	4	2	0	0	0	0	0	0	3	7	2	5	5	0	0	0	0	0	0	0	0
Velvetleaf	0	4	6	0	0	0	0	3	4	8	7	6	7	7	0	0	0	0	0	0	0	0
Wheat	0	1	0	0	0	0	0	0	0	0	2	3	3	3	0	0	0	0	0	0	0	0
Wild oats	0	8	3	0	0	0	0	2	3	7	6	7	9	9	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 125 g/ha	622	623	624	625	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644
Preemergence																						
B. signalgrass	0	0	6	4	5	7	2	3	7	3	3	5	8	9	3	7	0	2	0	2	2	0
Bedstraw	0	-	0	-	2	7	0	0	0	-	-	0	8	5	0	-	-	-	-	-	-	-
Blackgrass	2	0	8	3	8	9	8	8	7	4	3	6	-	4	3	5	0	0	0	0	0	0

Cocklebur	0	0	0	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	4	6	2	0	6	4	0	0	-	0	0	8	0	0	-	0	0	0
Crabgrass	6	0	-	7	8	8	9	8	7	7	8	8	9	9	9	9	7	3	3	8	3	-
Giant foxtail	-	7	10	9	10	10	10	10	9	10	9	10	9	10	10	10	9	9	9	10	8	2
Morningglory	0	0	0	0	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	7	6	2	0	4	0	0	0	0	0	0	5	0	0	0	0	0	0
Rape	0	0	0	0	3	2	0	0	0	0	0	2	6	2	0	5	0	0	-	2	0	0
Redroot pigweed	7	0	0	0	9	9	10	9	9	0	0	4	10	10	9	10	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	1	0	4	4	-	4	3	0	0	0	5	0	0	6	0	2	0	0	0	0
Velvetleaf	0	0	0	0	8	-	6	1	7	1	0	0	-	0	0	5	0	0	0	0	0	0
Wheat	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	6	0	3	2	0	3	2	2	2	5	6	0	0	4	0	0	0	0	0	0

Table B									COMPOUND													
Rate 125 g/ha	645	646	647	648	649	650	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667
Preemergence																						
B. signalgrass	0	0	7	0	0	0	0	0	0	0	2	8	0	4	1	0	0	0	5	4	3	5
Bedstraw	-	-	-	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	0	0	9	0	0	0	0	0	0	0	4	9	7	6	4	2	3	0	6	7	8	8
Cocklebur	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	4
Crabgrass	3	0	8	8	1	8	8	2	3	8	7	10	7	8	7	0	0	0	8	8	8	8
Giant foxtail	2	0	10	9	-	10	9	0	6	9	10	10	9	9	10	6	7	3	10	10	10	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Nutsedge	0	0	0	0	0	3	0	-	-	0	0	0	0	0	0	0	0	0	0	0	-	0
Rap	0	0	8	0	0	0	0	0	0	0	0	3	5	0	0	0	0	0	1	6	8	8
Redroot pigweed	0	0	10	0	0	7	0	0	0	2	4	10	9	6	5	0	0	0	7	8	10	10
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Sugarbeets	0	0	8	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	3	4	7
Velvetleaf	0	0	8	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	6	6
Wheat	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2
Wild oats	0	0	8	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	3	5	6	8

Table B									COMPOUND													
Rate 125 g/ha	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	689	691
Preemergence																						
B. signalgrass	8	8	9	6	4	6	7	6	0	0	0	0	0	0	6	0	0	7	5	9	4	8

Bedstraw	-	7	8	-	0	-	0	2	-	-	-	-	-	0	0	0	0	0	0	0	0	9
Blackgrass	8	10	9	7	3	8	8	9	0	0	0	0	0	0	5	3	3	7	7	9	9	9
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	-
Corn	-	9	4	0	0	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Crabgrass	8	9	10	8	10	8	9	7	3	3	0	0	0	0	9	8	7	9	9	-	9	9
Giant foxtail	9	9	10	9	10	10	9	10	8	5	0	0	0	0	10	9	9	9	9	6	10	10
Morningglory	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0
Nutsedge	0	-	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Rape	5	4	9	0	2	2	3	3	0	0	0	0	0	0	0	0	0	0	0	5	0	3
Redroot pigweed	7	10	10	2	3	7	7	9	9	4	0	0	0	0	4	2	0	4	6	9	7	3
Soybean	1	2	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Sugarbeets	6	8	9	9	4	0	5	7	2	0	0	0	0	0	0	0	0	0	0	5	2	2
Velvetleaf	6	0	8	7	3	3	7	7	4	0	0	0	0	0	0	0	0	0	0	5	3	0
Wheat	0	5	9	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	6	0	0
Wild oats	7	10	9	0	4	-	3	5	0	0	0	0	0	0	0	0	0	3	1	9	9	6

Table B	COMPOUND																					
Rate 125 g/ha	692	693	694	695	696	697	698	699	701	702	703	704	706	707	708	709	710	711	712	713	714	715
Preemergence																						
B. signalgrass	9	0	3	0	10	0	0	9	0	2	3	5	8	7	0	0	8	2	5	7	9	8
Bedstraw	1	0	0	0	0	0	0	-	0	0	0	0	0	7	0	0	3	3	0	0	8	0
Blackgrass	9	0	8	0	7	0	0	10	2	2	3	6	8	10	2	0	9	6	6	8	8	9
Cocklebur	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	9	0	9	9	8	0	3	10	10	10	8	8	5	9	7	3	10	9	9	10	10	9
Giant foxtail	9	0	10	10	9	0	0	10	10	10	7	7	6	10	7	4	10	10	10	10	10	10
Morningglory	1	0	2	0	0	0	0	4	0	0	0	0	1	3	0	0	0	1	0	0	2	1
Nutsedge	-	0	0	0	0	0	0	0	-	0	0	0	-	0	0	0	0	-	0	0	0	0
Rape	0	0	0	0	0	0	0	2	0	0	0	0	0	8	0	0	8	6	2	4	3	8
Redroot pigweed	8	0	4	0	3	0	0	3	0	5	4	5	8	10	3	0	8	7	8	7	9	9
Soybean	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	4	0	0	0	3	4	6	0	0	6	6	4	4	4	5
Velvetleaf	1	0	0	0	0	0	0	2	0	0	0	0	1	5	0	0	6	6	3	5	5	5
Wheat	0	0	0	0	0	0	0	3	0	0	0	0	4	2	0	0	6	6	0	0	4	0
Wild oats	9	0	0	0	0	0	0	10	0	0	0	0	7	8	0	0	9	7	3	5	4	9

Tabl B	COMPOUND																					
Rat 125 g/ha	716	718	719	720	721	722	723	724	725	726	727	728	729	730	732	733	734	735	736	737	738	739

Preemergence																						
B. signalgrass	0	2	7	9	8	0	0	0	3	7	6	8	10	0	0	6	9	8	3	4	9	-
Bedstraw	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Blackgrass	0	9	8	9	10	0	0	0	4	8	7	9	10	9	0	7	9	10	2	9	10	3
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	2	3	0	0	0	0	0	0	0	0	3	0	0	5	6	2	2	4	0
Crabgrass	0	10	3	9	9	0	2	3	6	9	8	6	9	9	0	5	9	10	3	9	9	2
Giant foxtail	0	10	5	10	10	0	7	0	8	9	7	7	9	10	0	6	10	10	8	10	9	9
Morningglory	0	0	1	0	2	2	0	0	1	0	0	0	0	0	0	1	2	0	0	2	1	0
Nutsedge	0	-	0	0	0	-	0	0	0	0	0	0	0	0	-	0	0	-	0	0	-	0
Rape	0	0	0	7	9	0	0	0	0	0	0	3	2	0	0	0	2	6	0	0	5	0
Redroot pigweed	0	4	7	9	10	0	0	0	0	4	5	7	9	9	0	0	7	7	0	3	7	2
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarb ts	0	0	4	6	7	0	0	0	0	0	0	0	0	2	0	0	2	2	0	5	6	2
Velvetleaf	0	0	0	2	5	0	0	0	0	0	0	0	2	2	0	0	3	0	0	0	1	0
Wheat	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	7	0	3	0	4	0
Wild oats	0	2	6	8	8	0	0	0	2	7	3	4	7	4	0	2	8	8	2	6	9	0

Table B

	COMPOUND																					
Rate 125 g/ha	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761
Preemergence																						
B. signalgrass	-	0	0	3	8	9	9	8	3	2	10	-	-	7	3	0	0	0	6	3	3	0
Bedstraw	0	0	0	0	0	-	-	0	0	0	0	2	10	0	0	0	0	0	1	0	0	0
Blackgrass	6	0	0	8	9	6	9	8	3	2	8	10	9	9	9	0	2	2	8	5	4	0
Cocklebur	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	-	0
Corn	0	0	0	0	0	0	3	2	0	0	3	4	0	0	0	0	0	0	0	0	0	0
Crabgrass	4	5	0	9	9	10	10	10	10	10	9	10	9	9	9	0	9	9	9	7	7	3
Giant foxtail	9	2	0	9	9	10	10	10	10	10	10	10	10	9	9	0	9	9	9	9	9	0
Morningglory	0	0	0	0	0	0	4	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	-	0	-	3	2	0	0	0	0	0	0	3	-	0	0	0	0	0	0
Rape	3	0	0	5	6	5	9	9	0	0	0	6	3	5	4	0	0	0	4	0	0	0
Redroot pigweed	9	0	0	9	8	9	10	-	10	5	9	10	2	8	8	0	0	0	8	2	7	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	-	0	0	2	2	4	7	6	0	2	3	2	0	0	0	0	0	0	7	0	3	0
Velvetleaf	0	3	0	2	0	0	6	6	0	0	0	8	0	0	1	0	0	0	4	0	0	0
Wheat	0	0	0	0	0	0	7	-	0	0	4	4	0	0	3	0	0	0	5	2	0	0
Wild oats	0	0	0	5	8	6	10	-	2	0	5	8	0	4	6	0	0	0	8	4	0	0

Table B	COMPOUND																	
Rate 125 g/ha	762	763	764	765	766	767	772	773	774	775	776	777	778	779	780	790	791	792
Preemergence																		
B. signalgrass	0	9	7	-	8	-	0	0	0	-	-	-	-	-	6	9	0	0
Bedstraw	0	6	5	-	9	0	0	0	0	0	0	0	0	0	0	3	0	0
Blackgrass	0	9	7	-	7	10	0	0	0	5	0	2	9	9	6	9	0	4
Cocklebur	0	0	-	0	0	0	0	0	0	0	-	0	0	0	0	0	0	-
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	0	2
Crabgrass	4	9	10	10	9	10	0	0	0	9	8	10	10	10	10	10	6	10
Giant foxtail	10	9	10	10	9	10	0	0	0	9	9	10	10	10	10	10	10	10
Morningglory	0	0	-	0	3	0	0	0	0	0	2	1	0	0	0	0	0	0
Nutsedge	0	-	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	0
Rape	0	5	0	-	5	6	0	0	0	0	0	0	0	0	0	4	0	0
Redroot pigweed	2	9	10	-	10	10	0	0	0	0	0	2	2	2	3	6	0	9
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Sugarbeets	0	0	0	-	6	6	0	0	0	0	0	0	2	2	2	2	0	3
Velvetleaf	0	1	5	4	5	0	0	0	0	0	0	0	0	2	3	2	0	3
Wheat	0	0	3	-	4	5	0	0	0	0	2	0	0	0	6	2	0	0
Wild oats	0	8	3	-	7	-	0	0	0	2	2	3	0	3	0	6	0	0

Table B	COMPOUND																						
Rate 62 g/ha	18	69	70	71	72	129	131	146	165	166	180	181	182	183	184	185	186	187	189	190	191	192	193
Pre-emergence																							
Barnyardgrass	2	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	194	195	196	197	198	200	201	202	203	204	205	206	207	208	210	211	212	213	214	215	216	217
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
Pre-emergence																						

Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	240	241	242	243	245	246	249	250	251	252	253	254	255	256	257	258	259	264	265	266	267	268
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	269	270	271	272	273	274	276	277	278	281	282	283	284	285	286	287	288	289	290	291	293	294
Pre-emergence																						
Barnyardgrass	0	0	4	0	0	0	1	2	0	0	7	0	0	0	0	0	0	0	3	2	0	0
Ducksalad	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Tabl B	COMPOUND																					
Rate 62 g/ha	295	296	297	298	299	300	301	303	304	305	310	311	312	313	314	315	316	318	319	320	321	323
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	324	325	326	327	328	329	330	334	335	336	337	338	339	340	341	346	350	351	353	354	358	366
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	2	7	2	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	367	368	369	370	371	372	373	374	375	376	378	379	380	381	382	383	384	385	387	388	389	390
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2

Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	1
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B									COMPOUND													
Rate 62 g/ha	391	392	393	394	395	401	402	403	404	405	406	407	408	409	410	411	414	437	438	439	441	442
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	5	2	4	0	0	0	0	1	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	4	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Tabl B									COMPOUND													
Rate 62 g/ha	443	444	445	446	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	465	466	467
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tabl B									COMPOUND													
Rate 62 g/ha	468	469	470	471	472	473	474	476	477	478	479	480	482	483	485	486	487	488	489	490	492	493
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B									COMPOUND													
Rate 62 g/ha	494	495	496	498	499	509	521	528	529	531	532	538	539	546	550	552	556	558	560	561	567	568
Pr - m rgence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0
Ric	0	0	0	0	0	0	0	-	-	0	0	-	0	-	0	-	0	-	0	0	0	1
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0
Table B									COMPOUND													
Rate 62 g/ha	570	577	580	586	588	589	590	591	592	593	594	595	596	598	601	602	603	604	605	606	607	608
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	609	610	611	612	613	614	615	618	619	620	621	622	624	625	627	628	629	630	631	632	633	634
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	636	637	638	639	640	641	642	643	644	645	646	647	649	650	651	655	656	657	658	659	660	661
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	663	664	665	666	667	668	671	674	675	676	692	694	695	696	697	699	701	702	705	706	715	720
Pre-emergence																						
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	4	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	3	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	6	0	0	0	0	0	0

Table B	COMPOUND						
Rate 62 g/ha	721	724	740	741	758	765	793
Pre-emergence							
Barnyardgrass	0	0	0	0	0	0	0
Ducksalad	0	0	0	0	0	0	6
Rice	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	6

Table B	COMPOUND																												
Rate 62 g/ha	4	10	11	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Postemergence																													
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	-	0	-
Bedstraw	0	0	0	0	0	0	0	2	2	3	0	1	0	2	4	0	0	3	0	0	0	0	0	4	0	0	0	0	-

Blackgrass	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	3	0	0	0	0	1	0	0	0	0	0	0	2	2	0	0	3	0	1	0	0	1	0	0	3	0	0	0
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-
Giant foxtail	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Morningglory	0	0	0	1	2	1	3	1	0	4	2	0	1	9	1	1	0	2	0	1	0	6	3	1	4	4	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-
Soybean	2	3	0	2	2	1	2	2	2	3	2	3	3	3	2	1	1	3	2	1	1	2	2	0	1	5	0	0	3
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B											COMPOUND																		
Rate 62 g/ha	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
Postemergence																													
B. signalgrass	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bedstraw	0	0	0	0	0	3	0	0	0	0	-	0	1	2	0	0	0	0	0	0	-	2	0	0	0	0	0	0	4
Blackgrass	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	1	0	0	0	0	0	0	-	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Giant foxtail	0	0	0	0	0	0	0	0	0	1	-	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morningglory	3	1	0	2	0	0	0	1	0	0	-	0	1	1	0	1	0	1	0	0	1	2	2	0	0	0	0	0	2
Nutsedge	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	1	0	0	0	0	0	0	-	0	0	1	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0
Rice	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	-	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soybean	3	3	0	2	0	1	1	2	1	1	-	0	2	3	0	1	2	1	1	1	2	1	1	2	0	1	1	0	1

Sugarbe ts	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																												
Rate 62 g/ha	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97
Postemergence																													
B. signalgrass	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	4	3	3	0	0	0	0
Barnyardgrass	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	0	0	0	0	0
Bedstraw	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	-	0	2	2	3	0	0	-	-	-	-	0	0	0
Blackgrass	0	0	0	0	0	0	3	0	0	0	0	2	2	0	0	-	0	0	0	2	0	0	8	7	7	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	1	1	3	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	2	0	3	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	2	0	0	3	2	-	0	0	-	0	2	2	0	0	1	5	6	7	3	0	1	0
Ducksalad	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	0	0	0	0	0
Giant foxtail	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	-	0	0	0	0	0	0	8	8	6	0	0	0	0
Morningglory	0	0	0	0	3	2	1	0	0	7	5	7	2	4	0	-	0	4	4	8	0	3	7	7	6	10	1	1	1
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	-	0	0	0	0	0	0	2	2	2	1	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	-	0	0	0	3	0	2	1	2	2	0	2	0	0
Rice	-	-	-	-	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	0	0	0	0	0
S. Flatsedge	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	0	0	0	0	0
Soybean	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	-	0	2	2	1	0	4	3	3	4	5	1	1	0
Sugarbeets	0	0	0	0	0	0	0	0	0	2	3	-	0	0	0	-	0	0	0	3	0	0	3	1	2	2	2	0	0
Velvetl af	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	1	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	1	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0	4	0	0	8	6	0	0
Barnyardgrass	5	0	-	0	0	-	-	0	0	-	0	0	0	0	0	0	0	0	0	0	-	-
Bedstraw	0	3	0	-	0	-	-	0	0	2	0	6	2	5	0	1	3	0	0	0	0	0
Blackgrass	0	3	0	0	0	0	0	2	0	7	4	7	1	0	0	8	0	4	9	8	0	2
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0

Crabgrass	0	0	0	0	0	0	0	-	0	8	4	8	2	1	0	9	2	0	9	9	1	2
Ducksalad	0	0	-	0	0	-	-	0	0	-	0	0	0	0	0	0	0	0	0	0	-	-
Giant foxtail	0	0	0	0	0	0	3	2	0	8	5	8	0	2	2	9	5	0	9	9	1	8
Morningglory	0	1	0	0	0	8	10	-	6	3	0	3	4	4	8	5	1	3	2	2	1	3
Nutsedge	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	5	2	0	0
Rape	0	2	0	0	0	0	0	0	0	0	0	3	2	3	2	0	3	0	0	0	0	0
Redroot pigweed	0	3	0	0	0	0	1	0	0	0	0	3	3	3	2	3	0	0	0	0	0	0
Rice	0	0	-	0	0	-	-	0	0	-	0	0	0	0	0	0	0	0	0	0	-	-
S. Flatsedge	0	0	-	0	0	-	-	0	0	-	0	0	0	0	0	0	0	0	0	0	-	-
Soybean	1	2	0	2	0	4	4	1	0	3	1	4	3	3	4	6	3	1	3	2	1	1
Sugarbeets	0	2	0	0	0	1	0	0	0	0	0	3	0	2	2	4	3	2	2	0	0	0
Velvetl af	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	4	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	2	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0

Table B									COMPOUND													
Rate 62 g/ha	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	5	2	0	0
Barnyardgrass	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	0	0	0	0	0	0	0
Bedstraw	-	-	-	-	-	-	0	0	0	0	0	7	0	0	4	0	2	4	2	-	4	2
Blackgrass	0	0	0	2	0	0	0	0	0	0	3	8	0	0	0	0	0	5	7	2	3	0
Cockl bur	1	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Crabgrass	5	4	0	0	0	0	0	0	0	2	5	5	5	0	0	0	1	7	8	8	0	0
Ducksalad	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	0	0	0	0	0	0	0
Giant foxtail	3	1	2	3	0	0	0	0	0	4	8	8	8	0	0	0	0	8	9	6	0	0
Morningglory	4	5	1	8	0	0	0	0	0	4	2	7	3	2	5	0	6	7	5	3	4	1
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	2	3	3	0	0
Rice	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	0	0	0	0	0	0	0
S. Flatsedge	0	3	0	0	0	0	0	0	-	-	-	-	-	-	-	0	0	0	0	0	0	0
Soybean	2	5	3	2	0	0	0	0	0	1	1	5	3	1	1	2	3	5	2	1	3	3
Sugarb ets	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	3	0	0	0	0
Velv tleaf	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	2	0	0

Wild oats	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	2	0	0

Table B	COMPOUND																					
Rate 62 g/ha	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163
Postemergence																						
B. signalgrass	0	0	0	0	4	7	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	-	-	-
Bedstraw	2	5	2	0	2	2	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	3	0	0	8	7	5	0	0	8	0	0	0	0	0	0	1	0	0	0	0	2
Cocklebur	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	3	1	2	2	8	9	8	0	0	8	0	0	0	1	0	0	0	0	0	0	0	6
Ducksalad	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	-	0	0	0	-	-	-
Giant foxtail	0	0	0	0	8	8	5	0	0	7	0	0	0	1	0	0	0	0	0	0	0	6
Morningglory	3	3	0	6	3	3	3	0	0	4	0	0	0	0	0	0	0	0	0	4	6	2
Nutsedge	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	3	0	0	4	0	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	-	-	-
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	-	-	-
Soybean	2	3	3	3	3	5	4	0	1	3	0	0	2	1	1	0	3	0	0	2	3	2
Sugarbeets	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	3
Wheat	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	2	2	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	164	165	166	167	168	169	170	171	172	173	174	175	177	178	179	180	181	182	183	184	185	186
Postemergence																						
B. signalgrass	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	0	-	-	-	-	0	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	0	0	3	2	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	0	0	0	0	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	2	0	0	0	2	8	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	0	-	-	-	-	0	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Morningglory	0	3	1	2	7	1	0	0	2	7	3	1	0	2	4	0	0	0	0	0	1	1
Nutsedge	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	-	-	-	-	0	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-
S. Flatsedge	0	-	-	-	-	0	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Soybean	0	2	0	2	1	1	2	1	2	2	2	1	1	1	1	0	0	0	0	1	2	1
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Velvetl af	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B									COMPOUND													
Rate 62 g/ha	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0
Blackgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morningglory	0	0	0	0	1	1	0	0	0	0	3	0	4	0	1	2	0	3	0	1	0	1
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Soyb an	0	1	0	0	3	3	0	0	2	0	0	0	2	2	1	2	0	1	0	0	1	1
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tabl B									COMPOUND													
Rate 62 g/ha	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231

Postemergence																						
B. signalgrass	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	4	0	0	0	0	0	0	6	6	6	2	3	3	3	0	0	7	0	0	0	0
Blackgrass	0	2	6	0	1	0	0	3	5	5	5	2	0	0	0	6	0	0	0	0	0	0
Cocklebur	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	6	0	1	0	0	0	1	3	3	2	0	0	0	5	0	0	0	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	4	0	0	0	0	1	1	6	5	2	0	0	0	8	2	0	0	0	0	0
Morningglory	2	4	2	6	2	0	3	0	3	6	5	0	1	1	2	2	5	4	2	0	0	1
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	2	0	5	0	0	0	0	0	5	0	6	0	0	0	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	3	1	1	0	0	1	1	3	5	5	2	2	3	2	2	2	1	0	0	0	0
Sugarbeets	0	0	0	3	0	0	0	0	2	4	0	0	0	0	1	0	0	0	0	0	0	0
Velvetleaf	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	3	0	0	0	5	3	0	0	0	0	3	2	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	248	249	250	251	252	253	254
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	0	0	0	0	0	0	0	0	2	0	0	3	7	0	0	0	2	0	0	0
Blackgrass	0	0	0	0	0	0	0	0	0	3	8	7	0	4	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	0	0	2	8	3	0	2	0	0	0	0	0	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	0	0	0	0	0	0	2	7	3	0	5	0	0	0	0	0	0	0	0
Morningglory	3	3	0	2	4	2	2	1	5	3	0	5	0	5	8	0	0	4	6	2	0	7
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rap	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Redroot pigweed	2	0	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	3	3	0	0	1	0	1	1	0	1	4	3	0	2	1	0	2	1	2	1	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Velvetleaf	2	2	0	0	0	0	1	0	0	2	3	0	0	3	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	4	2	0	4	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	276	277
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	0	2	0	6	0	0	0	0	0	0	0	0	-	0	4	0	0	0	0	5
Blackgrass	0	0	0	1	0	0	0	0	0	2	4	3	0	0	0	0	3	0	0	0	0	2
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2
Morningglory	3	8	6	3	6	2	3	3	2	7	6	4	1	1	3	0	2	0	0	0	3	7
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	3	0	2	0	0	1	0	0	2	2	0	0	3	0	3	0	0	0	0	1
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	3	3	3	3	1	2	1	0	0	3	5	2	0	1	0	4	1	2	2	3	3
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Wheat	0	0	0	0	2	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	278	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Bedstraw	0	-	5	0	2	0	2	4	0	0	0	0	0	0	3	0	0	0	0	2	0	0
Blackgrass	0	0	0	2	3	0	0	8	0	5	0	1	0	5	0	2	0	0	0	7	0	0
Cocklebur	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	2	0	3	0	0	0	6	0	0	0	0	0	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	0	0	0	0	7	0	2	0	0	0	5	0	0	0	0	0	7	0	0
Morningglory	3	2	6	8	7	3	1	2	7	3	4	4	0	1	6	1	0	0	0	3	0	0
Nutsedge	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	2	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
Redroot pigweed	0	0	4	4	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	2	3	4	4	2	1	1	0	2	2	1	0	1	2	2	0	2	0	-	1	0
Sugarbe ts	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	5	0	2	0	0	0	2	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B

	COMPOUND																					
Rate 62 g/ha	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	0	-	0	0	0	0	4	0	0	5	2	0	-	2	0	0	0	0	0	0	0
Blackgrass	0	0	0	0	0	0	0	5	0	0	0	2	0	0	8	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	8	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	0	0	0	0	7	0	0	0	0	0	0	5	0	0	0	0	0	0	0
Morningglory	0	3	0	2	0	0	1	4	0	0	2	2	0	3	1	0	2	1	2	4	0	0
Nutsedg	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	3	3	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	2	2	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Soybean	2	3	4	1	0	1	2	4	2	2	1	2	3	3	3	0	0	2	2	1	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	325	326	327	328	329	330	332	333	334	335	336	337	338	339	340	341	342	343	344	345	348	349
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	2	2
Bedstraw	2	-	7	0	0	0	0	0	0	0	0	0	0	0	3	0	4	0	0	0	-	2
Blackgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	2	1
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0
Giant foxtail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	3	0
Morningglory	4	5	7	7	0	0	0	0	0	0	0	0	0	2	2	7	7	2	0	0	2	5
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Redroot pigweed	0	3	4	2	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	4	0
Soybean	2	3	5	-	1	1	2	2	1	1	1	1	1	1	1	1	3	1	2	0	1	1
Sugarbe ts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0

Table B	COMPOUND																					
Rate 62 g/ha	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	367	368	369	370	371	372	373
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Barnyardgrass	0	0	0	-	0	1	-	0	2	0	2	-	-	-	0	-	-	0	0	-	0	-
Bedstraw	-	-	0	-	-	0	0	0	0	0	0	7	5	4	0	-	0	-	-	-	-	-
Blackgrass	4	0	8	0	3	3	3	3	2	0	5	5	8	5	0	0	7	0	2	2	4	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Corn	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	1	0	1	0	0	0	0	2	0	0	2	0	3	1	0	0	6	0	3	3	2	0
Ducksalad	0	0	0	-	0	0	-	0	0	0	0	-	-	-	0	-	-	0	0	-	3	-
Giant foxtail	5	0	2	0	0	2	2	8	3	0	8	1	6	4	0	0	8	0	6	5	4	0
Morningglory	3	3	0	3	0	2	4	2	3	0	4	1	1	1	0	5	2	7	10	7	5	8
Nutsedg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	2	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	2	0
Redroot pigweed	0	0	0	2	2	0	0	0	3	0	0	3	2	0	0	0	2	0	0	0	2	2
Rice	0	0	0	-	0	0	0	0	0	0	0	-	-	-	0	-	-	0	0	-	0	-
S. Flatsedge	0	0	2	-	5	0	-	0	0	0	2	-	-	-	0	-	-	0	2	-	2	-
Soybean	1	1	2	4	3	1	2	2	4	0	1	2	4	4	0	0	4	0	1	1	1	3
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	2	2	0	0	0	1	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	2	4	2	0	3	0	2	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	2	3	0	0	3	0	3	0	0	0	0	0	0	0	2	0

Tabl B

COMPOUND

Rate 62 g/ha	374	375	376	378	379	380	381	382	383	384	385	387	388	389	390	391	392	393	394	395	396	397
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Bedstraw	-	-	-	-	0	-	0	-	-	0	-	0	-	-	-	-	-	-	-	0	-	-
Blackgrass	0	2	0	0	0	0	0	0	0	3	0	3	-	0	8	-	7	0	2	0	0	6
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	0	0	1	6	0	4	0	2	0	2	0	2	0	0	2
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Giant foxtail	0	0	0	0	0	1	0	0	0	4	7	2	7	0	9	0	7	5	-	0	0	8
Morningglory	-	1	0	5	5	5	2	0	0	0	1	0	1	2	2	0	5	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	-	7	0	0	-	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Soyb an	2	1	0	0	1	0	1	1	2	1	2	0	1	2	2	0	1	1	3	0	2	3
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	398	400	401	402	403	404	405	406	407	408	409	410	411	414	415	416	417	418	419	420	421	422
Postemergence																						
B. signalgrass	0	0	0	0	0	2	0	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0
Barnyardgrass	0	0	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
Bedstraw	-	-	-	3	0	-	-	-	-	6	0	-	-	-	-	-	0	-	0	0	-	-
Blackgrass	0	0	0	-	6	5	0	0	0	0	6	-	-	0	0	6	0	2	0	0	8	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	2	0	0	3	2	0	0	0	0	3	6	4	4	1	0	2	0	0	0	2	4	0
Ducksalad	0	0	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
Giant foxtail	3	5	0	8	3	5	0	0	0	9	8	8	6	3	5	7	0	0	0	7	8	0
Morningglory	2	0	3	3	2	-	2	0	6	1	4	4	6	1	2	4	3	3	2	4	2	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	1	2	2	0	0	0	0	0	2	6	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Rice	0	0	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	-	-	-	-	-	-	-	-	-	-	-	-	0	0	2	0	0	0	0	0
Soybean	3	1	0	4	4	4	2	1	0	1	4	4	3	2	3	5	3	3	2	2	4	2
Sugarb ets	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wh at	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444
Postemergence																						
B. signalgrass	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	0	-	-	-	-
Bedstraw	-	0	-	-	-	-	-	-	-	-	-	0	0	0	0	0	-	-	-	0	0	-
Blackgrass	0	0	2	3	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	4	1	0	0	0	1	0	0	2	0	0	0	0	2	0	1	0	0	0	2
Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	0	-	-	-	-

Giant foxtail	0	0	6	3	0	0	0	6	0	0	4	0	0	0	0	5	0	0	0	0	0	4
Morningglory	2	0	2	6	0	0	1	1	0	1	2	0	1	0	0	4	0	2	0	4	2	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	0	-	-	-	-
Soybean	2	0	1	4	0	1	1	-	1	1	1	0	0	0	-	-	-	0	-	-	-	-
Sugarbeets	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	5	0	0	1	1
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Table B								COMPOUND														
Rate 62 g/ha	445	446	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	465	466	467	468	469
Postemergence																						
B. signalgrass	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	0	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	4	-	-	0
Blackgrass	0	4	0	0	0	0	0	0	6	4	0	0	0	2	0	0	0	0	8	0	0	7
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	5	0	0	0	3	0	2	4	4	0	2	0	3	0	0	0	1	9	0	3	3
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	6	0	2	0	2	3	2	7	2	0	7	0	0	0	0	0	2	9	0	1	8
Morningglory	3	2	2	0	1	1	0	7	3	3	0	0	6	7	3	0	0	0	0	3	2	9
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	-	0	0
Ric	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	1	0	1	0	1	1	1	1	1	0	0	3	3	2	0	1	1	4	0	1	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tabl B								COMPOUND														

Rate 62 g/ha	470	471	472	473	474	476	477	478	479	480	481	482	483	485	486	487	488	489	490	492	493	494
Postem rgence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	-	-	-	6	-	-	0	0	0	0	0	-	0	0	0	0	0	-	-	-	0
Blackgrass	0	0	0	0	7	0	0	0	0	0	0	0	0	3	0	0	1	1	2	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	1	7	1	2	0	1	2	2	2	0	0	0	3	0	0	-	2	3	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	7	1	3	0	2	3	0	3	2	0	0	5	2	0	5	2	2	0	0	0
Morningglory	0	3	3	0	1	0	6	3	7	2	0	5	0	8	1	2	1	2	2	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	0	2	2	1	3	0	1	2	1	2	4	1	0	2	4	3	4	3	4	0	-	0
Sugarb ets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0

Table B COMPOUND

Rate 62 g/ha	495	496	497	498	499	500	501	504	505	506	508	509	510	511	512	513	514	515	516	517	518	519
Postemergence																						
B. signalgrass	0	0	0	0	0	3	2	0	0	0	0	0	2	0	0	0	0	0	0	0	-	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	6	-	6	-	4	-	0
Blackgrass	0	2	0	0	0	3	3	6	2	0	0	2	5	0	2	4	0	0	0	0	4	0
Cocklebur	0	0	0	0	0	3	0	2	0	0	0	0	3	0	0	3	0	0	2	0	0	0
Corn	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	6	7	8	7	0	9	3	3	3	2	1	7	4	3	7	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	0	0	7	8	8	8	2	8	3	4	3	2	1	6	8	0	8	0	4
Morningglory	1	8	0	1	3	3	0	4	5	0	3	-	4	4	5	3	2	2	2	2	5	0
Nutsedge	0	0	0	0	0	0	-	0	0	0	-	0	-	0	0	0	0	0	0	0	0	-

Rape	0	0	0	0	0	3	2	1	0	0	1	0	1	0	0	0	6	4	1	0	0	0
Redroot pigweed	0	0	0	0	0	7	0	7	0	0	3	0	7	5	1	3	0	3	4	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soyb an	0	2	0	1	0	3	4	3	1	2	4	1	4	1	4	1	6	4	4	0	4	3
Sugarbeets	0	0	0	0	0	6	5	5	3	2	0	0	2	0	0	2	3	3	0	0	0	0
Velvetleaf	0	0	0	0	0	4	0	1	0	0	0	2	4	0	0	3	2	2	3	0	-	2
Wheat	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	520	521	522	523	524	525	526	527	528	531	532	533	534	535	536	540	541	543	544	545	546	548
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	0	0	-	-	-	0	0	0	0	-	-	-	-	0	0	0	0	0	0	0
Blackgrass	0	2	8	0	0	4	3	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	3	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	2	2	8	3	3	6	6	4	3	2	4	3	-	5	0	5	0	0	0	0	1	-
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	2	4	8	2	4	5	3	5	0	0	0	8	-	5	0	0	0	0	0	0	0	0
Morningglory	3	3	3	2	0	2	6	3	2	2	0	4	2	4	2	2	0	1	3	4	0	5
Nutsedge	0	0	0	0	-	0	0	0	-	0	4	0	0	0	0	0	0	0	0	0	-	-
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Redroot pigweed	0	0	0	0	0	2	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soyb an	2	4	4	4	3	3	2	3	3	3	0	4	-	3	2	1	0	0	0	1	1	2
Sugarbeets	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	3	0	2	0	0	2	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	4	0	0	-	0	0	0	2	0	1	0	0

Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	0	2	0	5	2	0	0	-	-	0	0	-	0	0	0	-	0	0	0	0
Blackgrass	0	0	4	0	0	0	0	0	0	0	7	2	2	3	0	0	0	0	0	8	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	2	-	0	3	0	0	0	0	0	0	5	0	2	7	9	2	0	2	3	8	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	2	2	0	0	0	2	0	4	0	2	9	2	2	7	6	2	0	0	0	7	0	0
Morningglory	4	1	1	1	0	1	1	0	5	10	9	4	1	4	4	5	3	5	0	7	3	4
Nutsedge	-	0	-	0	0	0	0	0	0	0	0	3	0	-	0	0	-	0	4	0	0	0
Rape	0	0	3	2	2	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	3	0	0	0	2	0	9	0	3	0	3	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	2	2	2	1	2	1	0	0	3	4	2	2	3	5	0	2	4	0	4	0	0
Sugarbeets	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Velvetleaf	-	0	0	0	-	0	0	0	0	0	0	0	0	3	0	0	3	3	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 62 g/ha	571	572	573	574	575	576	577	578	579	580	581	582	584	585	586	588	589	590	591	592	593	594
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	5	0	3	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	0	-	-	-	-	-	-	0	3	0	-	5	0	0	0	-	-	-	-	-	-
Blackgrass	0	0	0	2	0	0	0	0	0	2	4	3	5	3	0	0	0	0	0	0	0	-
Cocklebur	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	6	0	0	2	0	0	0	0	3	0	1	-	2	0	0	0	0	0	0	5
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	2	2	-	2	0	0	0	0	7	3	7	6	2	0	0	0	0	0	0	6
Morningglory	4	3	10	10	4	2	6	9	10	7	4	9	1	4	6	7	3	2	0	1	0	0
Nutsedge	0	0	0	0	-	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	2	0	0	0	0	0	2	0	4	0	0	3	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	3	0	0	5	0	0	-	0	0	0	0	0	0	0	-
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	2	2	4	3	2	2	3	2	2	0	1	2	-	2	2	2	1	1	1	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Tabl B	COMPOUND																					
Rate 62 g/ha	595	596	598	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	618	619	620	621
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	1	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	0	-	-	-	-	0	0	0	-	0	0	-	3	8	-	0	-	0	0	-
Blackgrass	3	0	0	-	4	0	0	0	0	0	4	5	8	7	7	8	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	5	0	0	3	2	0	1	0	0	5	3	5	9	8	4	8	0	0	0	0	1	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	0	0	7	1	0	1	0	0	6	5	6	8	8	7	5	0	0	0	0	0	0
Morningglory	1	0	0	1	0	0	0	-	6	6	0	8	8	7	5	7	2	0	0	0	2	1
Nutsedg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	-	0	1	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	2	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	0	1	0	4	3	0	0	2	1	3	3	5	5	5	4	4	3	1	0	1	1	1
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	2	0	0	0	0	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	2	0	0	3	0	0	0	0	1	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	622	624	625	627	628	629	630	631	632	633	634	635	636	638	639	640	641	642	643	644	645	646
Postemergence																						
B. signalgrass	0	4	0	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	0	0	-	0	3	0	-	0	0	0	5	7	-	-	-	-	-	-	-	0	0
Blackgrass	0	4	0	8	6	3	0	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0

Cocklebur	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	3	0	5	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Crabgrass	2	6	1	8	8	1	1	8	0	0	0	4	3	2	0	0	0	0	0	0	0	0
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	4	0	9	8	3	2	8	3	0	4	5	2	5	0	0	0	0	0	0	0	0
Morningglory	0	1	0	3	1	2	1	0	1	1	1	1	2	0	0	0	0	0	0	0	0	0
Nutsedg	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	-	0	0	0
Redroot pigweed	0	0	0	2	3	0	0	0	0	0	1	0	0	0	3	0	-	0	0	2	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	4	2	0	2	4	4	4	5	1	2	3	3	2	1	0	0	0	2	1	0	1	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0
Velvetl af	0	0	0	3	6	0	0	4	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0

Table B

	COMPOUND																					
Rate 62 g/ha	647	648	649	650	652	653	654	655	656	657	658	659	660	661	663	664	665	666	667	668	670	671
Postemergence																						
B. signalgrass	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	0	-	-	-	-	-	-	-	-	-	-	0	0	-	-	0	-	-	0	-	-	-
Blackgrass	6	0	0	0	0	0	0	0	6	6	0	1	0	0	0	4	3	6	6	7	2	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0
Corn	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	3	0
Crabgrass	7	0	0	0	0	0	0	1	0	3	0	1	0	0	0	0	1	3	6	6	9	1
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	8	0	0	0	0	0	0	1	3	5	0	5	3	2	0	2	2	2	5	8	9	5
Morningglory	0	6	4	4	3	0	3	9	1	2	7	4	1	0	0	0	4	0	2	1	3	1
Nutsedge	0	0	0	2	-	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Redroot pigweed	0	0	0	2	0	0	0	1	0	0	6	0	2	0	0	0	3	0	2	3	7	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	0	2	2	0	0	0	2	2	1	2	2	2	1	-	3	2	4	2	2	3	2
Sugarbeets	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Velvetleaf	5	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	5	0	5	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 62 g/ha	672	674	675	676	708	709	710	711	712	713	714	722	739	740	741	743	744	745	746	747	748	749
Postemergence																						
B. signalgrass	0	3	1	0	0	0	5	4	0	0	2	0	0	0	0	0	0	0	3	1	2	2
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	-	0	-	0	-	-	-	-	-	-	-	3	0	0	0	-	-	-	8	5	3
Blackgrass	0	4	5	2	0	0	5	3	0	1	7	0	0	3	0	3	5	3	5	5	5	5
Cocklebur	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	5	6	6	4	0	2	8	4	1	2	4	0	4	0	9	2	3	4	7	3	2	4
Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	3	7	8	4	0	3	8	6	3	4	6	0	7	2	0	7	6	2	6	8	2	3
Morningglory	4	2	1	0	0	-	4	2	3	2	0	4	6	2	-	5	2	3	4	2	0	2
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	2	0	5	0	0	0	0	0	0	0	4	4	0	2
Redroot pigweed	7	0	2	0	0	5	8	3	3	2	5	8	0	0	3	0	0	2	6	4	2	4
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	2	4	2	3	1	3	1	2	3	2	0	3	2	2	0	2	3	2	4	3	3
Sugarbeets	0	0	0	0	0	0	0	1	1	0	0	0	3	0	0	0	0	2	0	0	0	1
Velvetleaf	6	4	0	0	0	4	5	3	0	3	2	0	0	0	0	0	0	0	2	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0

Table B									COMPOUND													
Rate 62 g/ha	750	751	752	753	754	756	757	758	759	760	761	762	763	764	765	766	767	772	773	774	776	779
Postemergence																						
B. signalgrass	0	3	0	0	0	0	0	4	0	0	0	0	0	0	3	0	2	0	0	0	0	2
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	5	0	0	-	-	0	-	-	0	-	-	0	-	0	-	0	7	0	0	0	0	0
Blackgrass	4	6	0	0	2	0	0	3	4	0	0	0	5	3	3	0	9	0	0	0	2	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	7	7	3	0	5	0	3	2	2	5	-	0	2	0	3	2	8	0	0	0	2	3

Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	9	8	-	3	4	0	2	8	3	0	0	-	6	3	5	0	8	0	0	0	2	8
Morningglory	3	8	2	-	10	4	6	2	3	3	0	0	2	1	5	2	5	0	0	0	7	5
Nutsedg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	2	2	0	0	0	0	0	0	2	0	0	0	0	0	0	-	0	0	0	2	0
Redroot pigweed	4	-	0	4	-	0	1	7	0	0	0	0	0	0	6	5	6	0	0	0	2	2
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	2	2	4	1	0	2	3	4	3	4	2	2	2	1	2	2	1	0	0	0	2	2
Sugarbeets	0	3	3	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	0	0	0	2
Velvetleaf	0	0	0	0	0	0	0	5	2	0	0	0	0	0	6	0	2	0	0	0	3	2
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND			
Rate 62 g/ha	780	790	791	792
Postemergence				
B. signalgrass	0	2	0	0
Barnyardgrass	-	-	-	-
Bedstraw	0	0	0	-
Blackgrass	0	4	0	4
Cocklebur	0	0	0	0
Corn	0	0	0	0
Crabgrass	3	9	1	2
Ducksalad	-	-	-	-
Giant foxtail	7	9	0	2
Morningglory	4	2	3	6
Nutsedg	0	0	0	0
Rape	0	0	3	3
Redroot pigweed	0	0	2	0
Rice	-	-	-	-
S. Flatsedge	-	-	-	-
Soybean	3	2	4	4
Sugarbeets	0	0	0	0
Velvetleaf	0	4	2	0
Wheat	0	2	0	0
Wild oats	0	0	0	0

Table B	COMPOUND																												
Rate 62 g/ha	4	10	11	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Preemergence																													
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	3	0
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	1	0	0	0	0	0	2	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	3	0	4	0	4	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	3	2	0	0	0	0	0	6	3	1	4	3	3	0	5	0	0	3	3	3	9	4	3	7	3	8	0	2	0
Giant foxtail	9	3	0	6	6	0	3	2	0	3	8	3	2	6	5	0	0	2	0	2	6	4	4	2	3	10	0	10	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Redroot pigweed	2	0	0	0	0	0	3	4	0	0	6	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0

Table B	COMPOUND																												
Rate 62 g/ha	40	41	42	43	44	45	46	47	48	49	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
Preemergence																													
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bedstraw	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	2	3	0	0	0	0	1	0	1	2	0	0	3	2	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0
Giant foxtail	9	4	0	0	0	7	10	0	6	8	0	3	3	2	0	0	0	0	0	3	3	5	0	0	3	4	3	5	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																												
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rate 62 g/ha	70	71	72	73	74	75	76	77	78	79	80	81	82	83	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99
Preemergence																													
B. signalgrass	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	7	10	-	0	0	0	0	0	0
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0
Blackgrass	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	2	2	1	0	0	10	9	9	0	0	0	0	2	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0
Crabgrass	0	0	0	1	2	3	3	0	7	2	3	1	0	0	0	5	5	5	0	0	10	8	7	3	2	1	0	4	5
Giant foxtail	0	0	0	2	3	6	4	0	8	4	6	2	0	0	0	8	8	4	0	4	10	10	10	8	2	2	0	5	-
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	4	3	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	2	4	9	0	0	6	2	9	0	5	-	0	4	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbe ts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	7	2	6	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	4	5	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	7	8	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121
Preemergence																						
B. signalgrass	0	0	0	1	0	0	0	5	4	9	3	0	0	7	0	2	4	6	0	5	0	0
Bedstraw	0	0	0	0	0	0	0	2	0	8	0	0	0	4	0	0	2	0	0	-	0	0
Blackgrass	0	0	0	0	0	5	0	9	5	8	0	0	0	8	6	0	9	8	0	5	0	0
Cocklebur	0	0	0	0	-	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	4	0	0	2	0	0	3	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	2	0	2	0	10	7	10	3	6	5	7	2	4	8	9	7	7	6	2
Giant foxtail	0	0	2	8	0	10	2	10	10	10	10	8	8	9	5	9	10	10	9	9	8	8
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rap	0	0	0	0	0	0	0	3	0	7	0	0	0	4	0	0	6	6	0	4	0	0
Redroot pigweed	0	0	0	0	0	0	0	10	-	10	3	3	0	8	5	5	10	9	0	10	7	4
Soybean	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0

Sugarbeets	0	0	0	0	0	0	0	4	3	8	0	0	0	7	4	0	9	0	0	3	0	0
V lv tleaf	0	0	0	0	0	0	0	7	3	5	0	0	0	6	4	0	8	6	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3	2	0	0	0	0
Wild oats	0	0	0	0	0	2	0	9	9	8	0	0	0	6	5	0	7	3	0	5	0	0

Table B	COMPOUND																					
Rate 62 g/ha	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
Preemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	6	7	0	0	0	0	3	3	2	0	0	0	0	0
Bedstraw	0	0	0	0	0	0	0	0	0	-	0	0	0	-	-	4	5	0	0	0	0	0
Blackgrass	0	0	0	0	0	0	0	0	5	10	3	3	0	0	0	7	9	4	0	0	0	4
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0
Corn	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	4	4	0	0	0	0	0	6	6	2	7	1	2	0	0	8	9	7	4	0	0	3
Giant foxtail	7	7	0	0	0	0	0	7	7	10	8	3	6	0	0	8	7	10	1	0	0	3
Morningglory	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	4	8	0	0	0	0	0	0	7	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	6	7	2	0	0	-	7	9	9	6	0	0	0	-
Soybean	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	2	7	7	2	0	0	0	4	6	9	3	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	5	7	3	0	0	0	0	3	5	2	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	3	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	3	7	10	3	0	0	0	0	5	5	3	0	0	0	0

Tabl B	COMPOUND																					
Rate 62 g/ha	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
Preemergence																						
B. signalgrass	0	0	9	6	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bedstraw	0	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	0	8	8	4	0	0	8	0	0	0	0	0	0	0	0	0	3	0	7	0	0
Cocklebur	-	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	4	0	8	8	5	0	0	10	0	0	0	0	0	0	3	0	0	4	6	8	0	4
Giant foxtail	3	0	10	7	7	0	0	9	0	0	0	0	0	3	3	0	0	4	7	8	0	6
Morningglory	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	2	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Redroot pigweed	0	0	10	6	7	0	4	10	0	0	6	0	0	0	0	0	0	0	0	-	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	8	2	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	7	3	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	2	5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	9	2	6	0	0	8	0	0	0	0	0	0	0	0	0	0	0	3	0	4

Table B								COMPOUND														
Rate 62 g/ha	166	167	168	169	170	171	172	173	174	175	177	178	179	180	181	182	183	184	185	186	187	188
Preem rgence																						
B. signalgrass	0	2	0	7	2	0	2	0	0	0	0	6	7	0	0	0	0	5	0	0	0	0
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	0	0	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	4	7	0	8	8	2	7	2	2	5	1	0	6	0	0	0	0	0	2	2	0	0
Giant foxtail	3	8	6	10	9	5	8	6	8	5	3	4	6	0	0	0	0	0	0	5	0	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0
Rape	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	6	10	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	8	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B								COMPOUND														
Rate 62 g/ha	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	210	211
Preemergence																						
B. signalgrass	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0
Blackgrass	1	0	0	5	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6
Cocklebur	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	2	-	4	3	0	0	0	6	0	0	3	0	6	0	0	0	4	0	0
Giant foxtail	0	0	3	8	2	3	3	0	0	0	7	0	2	2	0	7	0	0	3	2	0	3
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Nutsedg	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-	0	0	0	0	-
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	5	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B								COMPOUND														
Rate 62 g/ha	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233
Preemergence																						
B. signalgrass	0	0	0	0	0	0	0	4	7	5	0	0	0	1	3	0	0	0	0	0	0	0
Bedstraw	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	4	0	0	4	0	6	8	7	8	5	0	0	2	2	10	2	0	0	0	0	2	2
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	3	0	3	4	5	7	6	0	4	2	9	5	1	0	0	1	0	5	5
Giant foxtail	2	0	2	3	0	6	9	10	9	5	0	7	3	8	9	9	-	0	2	0	6	7
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	-	-	-	0	-	0	0	7	-	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	9	0	0	4	0	0	6	0	0	9	0	0	0	6	0	3	0	0	0	0	0	3
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	3	5	0	0	0	0	0	0	2	0	0	0	0	0	0
Velvetleaf	2	0	0	0	0	0	0	3	1	0	0	0	0	4	2	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	3	6	0	0	0	0	5	6	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	5	2	3	2	0	-	0	4	1	0	0	0	0	0	0	0

Table B								COMPOUND														
Rate 62 g/ha	234	235	236	237	238	239	240	241	242	243	244	245	246	248	249	250	251	252	253	254	255	256
Preemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	6	4	0	3	0	0	0	0	2	0	0	0	0	0
Bedstraw	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	0	0	0	0	0	0	6	9	8	0	10	-	0	0	0	6	0	0	0	10	0
Cocklebur	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	2	0	2	-	2	3	9	7	0	9	3	0	0	2	3	0	0	0	0	0

Giant foxtail	0	0	7	0	5	4	5	10	10	10	0	9	8	0	0	8	8	3	0	0	8	0
Morningglory	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	-	-	-	-	0	0	-	-	10	0	0	-	-	0	0	-	-	-	-	0	-	-
Rape	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	9	6	0	8	0	0	0	0	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	3	2	0	3	0	0	0	0	6	0	0	0	0	0
Velvetl af	0	0	0	0	0	0	0	2	6	4	0	7	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	5	5	0	6	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	3	7	3	0	3	2	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	276	277	278	281
Preemergence																						
B. signalgrass	0	0	2	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	4	-	0	0
Bedstraw	0	0	7	0	-	0	0	0	0	0	0	0	0	0	3	0	0	0	0	-	-	0
Blackgrass	0	6	2	0	0	0	0	0	0	8	0	0	0	0	8	0	0	0	-	-	0	0
Cockl bur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	3	4	0	2	0	0	0	1	0	2	0	0	0	3	0	2	0	3	4	0	2
Giant foxtail	3	8	9	3	8	0	2	2	6	0	8	0	3	0	8	2	7	0	9	10	0	7
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Nutsedge	-	-	0	0	-	0	0	-	0	-	0	0	0	0	0	0	-	0	0	0	-	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	-	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	-	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	-	0	0
Velvetleaf	0	2	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0
Wild oats	0	2	2	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	-	0	0

Table B	COMPOUND																					
Rate 62 g/ha	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	303	304
Preemergence																						
B. signalgrass	0	6	5	2	0	6	0	7	0	0	0	2	0	6	0	0	0	6	0	0	0	0
Bedstraw	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	-	-	10	-	0	0	0
Blackgrass	0	7	0	0	0	10	0	8	2	0	0	7	0	5	0	0	0	9	0	0	0	0
Cocklebur	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-

Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	1	2	4	4	0	8	1	2	1	0	0	1	1	2	0	0	0	6	0	0	0	3
Giant foxtail	8	8	9	8	8	10	5	10	8	8	0	9	7	8	0	0	0	9	0	0	0	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
Rape	0	0	2	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Redroot pigweed	1	2	5	0	0	5	0	5	2	0	0	6	0	3	0	0	0	9	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	2	0	0	3	0	2	2	0	0	0	0	0	0	0	0	3	0	0	0	0
Velvetleaf	0	0	0	0	0	6	0	3	0	0	0	4	0	0	0	0	0	6	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	0	0	0
Wild oats	0	0	0	0	0	8	0	1	0	0	0	1	0	2	0	0	0	2	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327
Preemergence																						
B. signalgrass	0	0	0	0	4	0	0	0	0	2	6	5	0	0	0	0	0	0	0	0	0	0
Bedstraw	0	0	0	0	2	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	-	-
Blackgrass	0	0	0	0	10	0	0	0	5	4	8	3	0	0	0	3	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	5	0	0	0	1	2	6	6	0	0	2	0	1	0	0	0	0	0
Giant foxtail	2	6	0	5	10	0	0	0	3	7	9	9	0	6	0	4	6	0	0	3	0	7
Morningglory	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Redroot pigweed	0	0	0	0	9	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Sugarbeets	0	0	0	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	8	0	0	0	0	0	4	5	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	328	329	330	332	333	334	335	336	337	338	339	340	341	342	343	344	345	348	349	350	351	352
Preemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	-	-	0	0	2
Bedstraw	0	0	-	0	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	10	-	0

Blackgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	4	2	4	0	9
Cocklebur	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	0	0	0	0	0	2	4	6	0	0	7	3	8	7	9
Giant foxtail	0	0	0	0	0	0	2	0	0	0	1	8	9	8	10	0	0	9	8	10	10	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0
Rap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	4	10	-
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	3	0	2	0	2
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3	0	0	0	8

Table B									COMPOUND													
Rate 62 g/ha	353	354	355	356	357	358	359	360	361	362	363	364	367	368	369	370	371	372	373	374	375	376
Preemergence																						
B. signalgrass	0	1	0	0	1	1	0	5	3	4	3	0	0	1	0	0	0	0	0	0	0	0
Bedstraw	0	0	0	0	10	0	0	-	0	9	9	0	10	0	-	0	-	0	0	0	6	-
Blackgrass	2	3	2	5	7	4	0	9	3	9	8	0	2	8	0	6	5	5	1	0	3	0
Cocklebur	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	0
Crabgrass	7	9	4	7	9	9	0	9	2	5	3	0	6	10	5	7	8	8	4	6	7	0
Giant foxtail	9	10	10	10	10	10	0	10	7	10	-	3	10	10	8	9	10	10	8	8	10	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	5	0	0	0	0
Redroot pigweed	7	5	-	0	7	7	0	5	1	8	2	0	10	10	0	5	4	6	0	0	10	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	2	0	0	2	0	5	0	0	2	6	0	2	0	2	0	0	0	0
Velvetleaf	0	1	0	1	4	3	0	3	0	4	1	0	3	4	0	2	0	3	0	0	0	0
Wheat	0	0	0	0	4	0	0	3	0	7	3	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	5	9	4	0	3	7	7	5	0	0	4	0	0	0	4	0	0	0	0

Table B									COMPOUND													
Rate 62 g/ha	378	379	380	381	382	383	384	385	387	388	389	390	391	392	393	394	395	396	397	398	400	401
Preemergence																						

B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	2	0	0	3	0	0	0
Bedstraw	0	0	-	0	-	0	-	0	0	-	-	-	-	-	0	-	0	-	-	-	-	0
Blackgrass	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	7	0	0	7	3	0	0
Cocklebur	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	1	0	6	6	6	3	0	6	1	8	0	10	0	9	0	0	10	9	6	0
Giant foxtail	4	0	2	0	9	0	9	3	3	8	2	10	0	10	1	9	0	2	10	10	9	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	2	0	0	0	8	0	2	0	1	0	0	8	2	3	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	3	0	3	0	2	0	4	0	0	2	0	0	0
Table B									COMPOUND													
Rate 62 g/ha	402	403	404	405	406	407	408	409	410	411	414	415	416	417	418	419	420	421	422	423	424	425
Preemergence																						
B. signalgrass	0	3	2	0	0	0	0	0	1	0	0	2	7	2	0	0	2	7	0	0	0	3
Bedstraw	2	0	0	-	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	3	2	6	0	0	0	6	4	3	6	0	5	8	3	4	0	4	8	0	0	0	7
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	4	0	0	0	0
Crabgrass	9	10	10	0	0	0	9	9	7	9	2	8	7	6	6	0	7	8	0	0	0	9
Giant foxtail	10	10	10	0	0	0	10	9	9	10	2	9	8	4	7	0	5	9	0	0	0	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	1	0	0	0	0	0	0	2	0	2	7	0	0	0	0	8	0	0	0	0
Redroot pigweed	0	0	2	0	0	0	4	7	0	3	0	0	7	0	2	0	0	8	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
Sugarbeets	0	0	0	0	0	0	2	2	0	5	0	0	3	0	0	0	0	8	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	2	3	2	0	0	0	0	0	0	0	8	0	0	0	0
Wheat	0	0	0	0	0	0	0	4	0	0	0	0	2	0	0	0	0	4	0	0	0	2
Wild oats	1	0	3	0	0	0	0	0	3	0	0	0	6	0	0	0	0	6	0	0	0	2
Table B									COMPOUND													

Rate 62 g/ha	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	449
Preemergence																						
B. signalgrass	4	0	0	0	1	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Bedstraw	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Blackgrass	4	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	5	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	8	5	2	7	9	0	3	9	0	-	0	0	3	0	7	0	7	5	4	0	8	0
Giant foxtail	9	7	0	3	10	0	0	10	0	0	0	0	2	0	6	0	0	3	9	0	9	2
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	10	0	6	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B COMPOUND

Rate 62 g/ha	450	451	452	453	454	455	456	457	458	459	460	461	462	463	465	466	467	468	469	470	471	472
Preemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	3	0	6	3
Bedstraw	-	-	-	-	-	-	-	-	-	0	0	-	0	-	-	-	0	-	-	-	-	-
Blackgrass	0	0	0	0	0	3	0	0	6	0	0	0	0	0	2	2	0	3	6	0	9	9
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	2	0	5	5	2	5	6	0	6	5	0	0	0	0	2	6	5	9	9	1	9	9
Giant foxtail	2	0	2	7	6	10	5	0	9	8	0	0	0	0	7	9	0	6	9	0	10	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0
Redroot pigweed	0	0	0	0	0	7	0	0	0	0	0	0	0	2	3	1	7	0	5	0	10	10
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	1
Velvetleaf	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	1
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	2	2

Tabl B								COMPOUND														
Rate 62 g/ha	473	474	476	477	478	479	480	481	482	483	485	486	487	488	489	490	492	493	494	495	496	497
Preemergence																						
B. signalgrass	0	0	0	0	4	0	0	7	0	0	3	5	3	4	6	3	0	0	0	0	0	0
Bedstraw	-	0	0	0	-	-	-	0	0	0	-	-	-	-	-	-	0	0	0	-	0	0
Blackgrass	0	3	0	0	4	2	3	6	0	0	4	7	2	5	7	7	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	-	6	0	8	8	-	7	7	3	0	6	8	6	8	9	8	0	0	0	0	0	0
Giant foxtail	2	7	0	6	9	7	10	9	1	0	7	9	9	9	9	9	2	3	0	0	2	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	-	0	0	0	-	0	0	0	0	0	0	0	0	0	-	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0
Redroot pigweed	2	1	0	0	8	0	2	0	0	0	1	6	1	4	0	5	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	2	0	0	4	0	0	2	0	0	3	0	6	0	0	0	0	0	0

Table B								COMPOUND														
Rat 62 g/ha	498	499	500	501	502	503	504	505	506	508	509	510	511	512	513	514	515	516	517	518	519	520
Preemergence																						
B. signalgrass	0	0	9	8	6	6	7	0	0	4	2	7	0	3	0	6	2	1	0	0	0	0
Bedstraw	-	0	8	2	10	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	0	9	5	10	10	6	0	0	1	5	6	0	0	1	2	3	3	2	7	0	0
Cocklebur	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	-	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	4	7	8	10	8	6	-	0	6	3	5	5	3	4	5	6	6	4	0	7	9
Giant foxtail	0	3	9	9	10	9	9	9	0	10	9	9	5	5	2	9	10	10	2	0	10	9
Morningglory	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nuts dge	0	-	0	0	0	0	2	3	0	-	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	9	0	2	4	5	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	10	9	9	8	10	9	2	7	0	7	4	3	7	7	8	7	8	2	0	0
Soybean	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	9	0	0	2	4	3	0	1	0	0	0	0	0	0	0	1	0	0	0	0

Velvetleaf	0	0	5	0	0	6	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	2	4	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	7	0	9	6	6	2	0	3	0	4	0	2	3	3	3	0	4	4	0	0

Table B	COMPOUND																					
Rate 62 g/ha	521	522	523	524	525	526	527	528	531	532	533	534	535	536	540	541	543	544	545	546	548	549
Preemergence																						
B. signalgrass	0	10	4	0	9	8	2	0	2	0	2	9	-	0	0	0	0	3	0	0	0	0
Bedstraw	0	10	0	-	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	8	0
Blackgrass	0	4	2	4	8	7	0	0	2	0	4	8	-	0	0	0	0	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0
Corn	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	10	9	9	9	9	9	9	7	8	9	9	9	10	0	8	5	4	9	8	7	9	3
Giant foxtail	10	10	10	9	9	9	9	9	9	10	9	9	10	7	9	7	3	9	10	-	9	9
Morningglory	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	-
Rape	0	0	0	2	0	4	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	10	2	8	0	4	0	0	0	0	8	0	2	0	0	0	7	3	3	-	0	6
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	5	3	0	5	4	0	0	0	0	3	3	4	0	0	0	4	0	0	0	0	0
Velvetleaf	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	10	0	7	5	7	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571
Preemergence																						
B. signalgrass	6	4	4	6	7	6	6	4	0	8	4	4	5	3	2	0	9	0	3	0	0	0
Bedstraw	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackgrass	0	3	0	7	-	0	6	6	2	9	4	5	4	2	0	0	3	0	5	0	0	0
Cocklebur	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0
Crabgrass	4	9	9	10	9	9	9	9	8	9	9	9	8	8	7	0	9	0	7	7	9	2
Giant foxtail	7	10	9	10	9	9	9	9	8	10	10	0	4	9	9	0	9	3	9	9	0	3
Morningglory	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	7	0	2	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	7	8	0	0	9	0	0	0	0	7	3	3	10	4	0	0	0	0	2	7	0	0

Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	2	0	0	0	2	0	2	0	3	0	0	6	2	2	0	0	0	5	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	5	0	0	0
Wheat	0	0	0	-	3	0	0	0	0	3	3	0	3	3	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	-	0	0	4	2	0	0	3	0	5	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	572	573	574	575	576	577	578	579	580	581	582	584	585	586	588	589	590	591	592	593	594	595
Preemergence																						
B. signalgrass	0	7	4	6	0	0	0	0	2	0	0	7	3	0	0	0	0	0	0	0	3	2
Bedstraw	0	0	0	0	0	0	0	0	0	8	0	9	7	-	-	-	0	0	0	0	0	0
Blackgrass	0	0	0	2	0	0	0	0	0	0	0	9	3	3	0	0	0	0	0	0	5	6
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
Corn	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	3	2	8	0	7	0	7	6	4	0	8	5	9	3	0	0	0	0	0	9	7
Giant foxtail	0	9	9	8	2	7	2	8	9	4	0	9	7	9	7	3	0	0	0	0	9	10
Morningglory	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Rape	0	2	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	4
Redroot pigweed	0	0	0	9	0	0	2	0	9	-	0	7	6	0	0	0	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbe ts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Velvetleaf	0	0	0	0	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	2	7
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

Table B	COMPOUND																					
Rate 62 g/ha	596	598	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	618	619	620	621	622
Preemergence																						
B. signalgrass	0	0	3	0	0	0	0	0	4	1	3	6	7	4	7	0	0	0	0	0	0	0
Bedstraw	0	0	0	0	-	-	0	-	-	-	4	-	1	-	-	0	0	0	-	0	0	0
Blackgrass	0	0	-	0	0	0	0	0	4	2	7	8	9	8	8	0	0	0	0	0	0	1
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	0	0	0	0	0	0
Crabgrass	0	0	6	7	0	0	0	0	7	7	7	9	9	10	9	0	0	0	0	0	5	6
Giant foxtail	0	0	10	9	0	0	2	0	9	9	10	9	10	10	10	0	0	2	0	0	0	4
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	-	0	-	0	0	0	0

Rape	0	0	0	0	0	0	0	0	0	1	0	3	3	0	7	0	0	0	0	0	0	0
Redroot pigweed	0	0	4	2	0	0	0	0	4	5	8	10	6	8	10	0	0	0	0	0	0	4
Soybean	0	0	0	-	0	0	0	0	0	0	4	0	2	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	3	2	3	3	0	0	0	0	0	0	0
Velvetleaf	0	0	1	0	0	0	0	0	0	0	7	7	6	6	7	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0
Wild oats	0	0	3	0	0	0	0	0	0	0	3	5	5	5	7	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	624	625	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646
Preemergence																						
B. signalgrass	3	0	5	3	0	0	6	0	0	1	4	3	0	4	0	0	0	0	0	0	0	0
Bedstraw	0	-	2	6	0	0	0	-	-	-	9	-	0	-	-	-	-	-	-	-	-	0
Blackgrass	1	0	8	6	4	5	6	2	0	4	9	2	2	4	0	0	0	0	0	0	0	0
Cocklebur	0	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	3	3	1	0	5	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0
Crabgrass	7	2	7	8	7	7	7	2	5	7	9	8	9	9	7	3	0	6	0	2	2	-
Giant foxtail	10	6	9	10	8	9	9	8	6	9	9	9	9	10	7	9	5	8	6	0	1	0
Morningglory	0	0	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nuts dge	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	9	8	2	2	7	0	0	0	10	10	4	7	0	0	0	0	0	0	0	0
Soybean	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	5	3	2	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	7	7	3	0	6	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Wheat	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	2	0	0	-	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	647	648	649	650	652	653	654	655	656	657	658	659	660	661	663	664	665	666	667	668	669	670
Preemergence																						
B. signalgrass	3	0	0	0	0	0	0	0	0	2	0	2	0	0	0	1	1	2	3	5	8	8
Bedstraw	-	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	0	8
Blackgrass	7	0	0	0	0	0	0	0	4	5	3	3	0	0	0	5	5	6	8	6	9	8
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Crabgrass	8	0	0	3	4	0	0	-	7	3	3	8	4	0	0	4	6	7	8	8	9	10
Giant foxtail	9	5	0	7	8	0	0	3	4	10	9	9	8	2	0	9	9	9	10	9	9	10

Morningglory	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Nutsedge	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Rape	5	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	4	0	7	0	2	8
Redroot pigweed	10	0	0	1	0	0	0	0	0	7	2	6	0	0	0	2	7	8	10	0	6	9
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	7	0	-	0	0	0	0	0	0	7	3	0	0	0	0	0	0	0	5	0	6	8
Velvetleaf	6	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	5	6	3	0	6
Wheat	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	6	7
Wild oats	5	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	5	4	2	10	7

Table B									COMPOUND													
Rate 62 g/ha	671	672	673	674	675	676	682	683	684	685	686	687	689	691	692	693	694	695	696	699	700	701
Preemergence																						
B. signalgrass	4	2	4	6	4	0	2	0	0	5	2	6	2	0	2	0	3	0	0	8	4	0
Bedstraw	-	0	3	0	0	-	0	0	0	-	0	0	0	0	0	0	0	-	0	0	0	0
Blackgrass	5	1	3	6	5	0	3	1	1	5	4	8	9	4	8	0	7	0	6	8	4	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0
Crabgrass	4	8	4	8	6	0	5	6	3	9	8	4	9	9	9	0	8	8	8	10	10	0
Giant foxtail	8	9	9	8	9	8	9	8	7	9	9	6	10	9	9	0	9	8	8	10	10	6
Morningglory	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	2	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	-	0	-	0	0	0	-	0	0	-	0	-	0
Rape	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	6	7	5	4	4	0	0	0	0	8	3	2	7	0	0	0	3	3	0	0
Soybean	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Sugarbe ts	1	3	0	2	5	2	0	0	0	0	0	4	0	0	0	0	0	0	0	3	0	0
Velvetleaf	2	0	0	6	6	4	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	5	1	4	0	0	0	0	0	0	7	7	2	0	0	0	0	0	9	4	0

Table B									COMPOUND													
Rate 62 g/ha	702	703	704	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	725	726
Preemergence																						
B. signalgrass	0	2	2	2	6	0	0	8	2	3	5	7	8	0	4	0	3	8	7	0	0	4
Bedstraw	0	0	0	0	7	0	0	3	2	0	0	0	0	0	0	0	0	-	3	0	0	0
Blackgrass	2	0	2	8	9	0	0	9	6	3	5	7	9	0	9	8	6	9	9	0	2	7
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Crabgrass	9	5	5	5	5	6	2	10	8	8	10	10	9	0	10	9	-	9	9	0	6	9
Giant foxtail	10	5	4	6	6	5	2	10	10	10	10	10	10	0	10	10	-	9	9	0	7	9
Morningglory	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Nutsedge	0	0	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	-	0	0	0	0
Rape	0	0	0	0	8	0	0	7	1	0	4	2	2	0	0	0	0	6	1	0	0	0
Redroot pigweed	2	0	0	8	-	0	0	8	7	6	6	10	8	0	6	0	7	8	9	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	6	0	0	6	5	0	3	2	4	0	0	0	4	4	3	0	0	0
Velvetleaf	0	0	0	0	3	0	0	5	4	0	2	6	0	0	0	0	0	1	0	0	0	0
Wheat	0	0	0	0	2	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	-	0	0	4	8	0	0	8	7	0	2	0	9	0	9	2	2	7	6	0	0	1

Table B	COMPOUND																					
Rate 62 g/ha	727	728	729	730	732	733	734	735	737	738	739	740	741	742	743	744	745	746	747	748	749	750
Preemergence																						
B. signalgrass	0	5	5	0	0	6	9	7	4	6	-	-	0	0	0	5	8	7	7	0	0	5
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	-	0	0
Blackgrass	0	0	6	6	0	4	7	8	6	8	2	3	0	0	8	6	3	9	8	0	0	7
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	-	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Crabgrass	3	6	7	9	0	2	9	10	8	8	2	4	5	0	9	9	7	9	10	9	9	9
Giant foxtail	7	4	9	10	0	3	9	9	9	8	9	4	0	0	9	9	10	10	10	9	9	9
Morningglory	0	0	0	0	0	1	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	-	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	1	0	2	0	0	0	0	5	4	0	2	7	0	0	0
Redroot pigweed	0	0	7	6	0	0	2	5	2	6	2	3	0	0	7	4	7	10	8	4	0	7
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	1	3	2	0	0	0	0	0	0	5	4	0	0	1
Velvetleaf	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	6	0	0	0	2
Wild oats	0	0	2	0	0	2	3	6	5	4	0	0	0	0	5	3	2	7	3	0	0	0

Table B	COMPOUND																					
Rate 62 g/ha	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	772	773	774	776	779
Preemergence																						
B. signalgrass	-	-	2	3	0	0	0	6	3	2	0	0	0	8	5	6	-	0	0	0	-	-
Bedstraw	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	-	0	0	0	0	0
Blackgrass	9	4	5	7	0	0	1	6	4	0	0	0	8	7	7	0	10	0	0	0	0	2

Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	10	9	9	8	0	4	6	9	7	2	3	-	9	10	9	9	10	0	0	0	5	9
Giant foxtail	10	10	9	8	0	7	9	9	9	8	0	5	9	10	9	9	10	0	0	0	9	9
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Nutsedge	0	0	0	3	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	4	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0
Redroot pigweed	10	0	6	8	0	0	0	8	0	7	0	2	8	9	8	9	10	0	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	2	0	0	0	0	0	0	5	0	3	0	0	0	0	6	2	2	0	0	0	0	0
Velvetleaf	7	0	0	0	0	0	0	2	0	0	0	0	0	3	0	5	0	0	0	0	0	2
Wheat	0	0	0	0	0	0	0	4	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Wild oats	3	0	0	0	0	0	0	5	0	0	0	0	2	0	4	3	9	0	0	0	2	0

Table B	COMPOUND			
Rate 62 g/ha	780	790	791	792
Preemergence				
B. signalgrass	6	8	0	0
Bedstraw	0	0	-	0
Blackgrass	2	8	0	1
Cocklebur	0	0	0	0
Corn	2	2	0	0
Crabgrass	10	10	6	10
Giant foxtail	10	10	10	10
Morningglory	0	0	0	0
Nutsedg	0	0	0	0
Rape	0	2	0	0
Redroot pigweed	0	2	0	7
Soybean	0	0	4	0
Sugarbeets	2	1	0	0
Velvetleaf	0	0	0	0
Wheat	0	0	0	0
Wild oats	0	0	0	0

Table B	COMPOUND																				
Rate 31 g/ha	196	200	217	221	285	287	288	289	290	291	295	296	318	324	392	442	450	483	614	644	656
Pre-emergence																					
Barnyardgrass	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	0	0	0	0	0	0

Ducksalad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S. Flatsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND																								
Rate 31 g/ha	4	14	22	23	26	27	28	29	30	31	32	33	87	98	100	137	138	139	146	155	156	200	213	217	221
Postemergence																									
B. signalgrass	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	0
Barnyardgrass	0	0	0	0	-	-	-	-	-	-	-	-	0	3	-	0	0	0	0	0	0	-	-	-	-
Bedstraw	0	-	0	0	0	0	3	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	2
Blackgrass	0	-	0	0	0	0	0	0	0	0	0	3	-	0	0	-	-	-	4	0	0	0	0	0	2
Cocklebur	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	0
Corn	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	0
Crabgrass	0	-	0	0	0	0	1	0	0	0	0	0	-	0	0	-	-	-	5	0	0	0	0	0	0
Ducksalad	0	0	0	0	-	-	-	-	-	-	-	-	0	0	-	0	0	0	0	0	0	-	-	-	-
Giant foxtail	0	-	0	0	0	0	1	0	0	0	0	0	-	0	0	-	-	-	3	0	0	0	0	0	0
Morningglory	0	-	0	0	0	0	0	0	1	0	6	3	-	0	0	-	-	-	2	0	0	0	5	0	0
Nutsedge	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	0
Rape	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	0
Redroot pigweed	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	2
Rice	0	0	0	0	-	-	-	-	-	-	-	-	0	0	-	0	0	0	0	0	0	-	-	-	-
S. Flatsedge	0	0	0	0	-	-	-	-	-	-	-	-	0	0	-	0	0	0	0	0	0	-	-	-	-
Soybean	1	-	3	3	1	1	3	1	1	0	2	2	-	1	0	-	-	-	2	1	1	1	1	1	1
Sugarb ets	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	0
Velvetleaf	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	0
Wheat	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	0
Wild oats	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	-	-	-	0	0	0	0	0	0	0

Table B	COMPOUND																					
Rate 31 g/ha	225	244	250	252	256	264	285	287	288	289	290	291	295	296	318	324	362	392	442	450	481	483
Postemergence																						
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Barnyardgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bedstraw	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	-	0	0	-	-
Blackgrass	0	0	0	0	0	0	0	8	0	2	0	0	0	0	0	0	8	7	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	1	0	0	0	0

Ducksalad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	5	7	0	0	0	0
Morningglory	2	0	4	2	6	6	1	2	3	2	4	1	1	0	0	0	0	3	1	0	0	0
Nutsedge	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soybean	1	0	1	1	3	0	0	1	0	0	1	1	1	0	0	0	4	1	0	0	4	0
Sugarb ets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B	COMPOUND							
Rate 31 g/ha	518	548	614	644	656	722	776	779
Postemergence								
B. signalgrass	3	0	0	0	0	0	0	2
Barnyardgrass	-	-	-	-	-	-	-	-
Bedstraw	-	0	-	-	-	-	0	0
Blackgrass	4	0	0	0	6	0	2	0
Cocklebur	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0
Crabgrass	0	0	0	0	0	0	2	3
Ducksalad	-	-	-	-	-	-	-	-
Giant foxtail	0	0	0	0	0	0	2	5
Morningglory	5	1	0	0	0	3	4	5
Nutsedge	0	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	2	0	0	0	2
Rice	-	-	-	-	-	-	-	-
S. Flatsedge	-	-	-	-	-	-	-	-
Soybean	4	1	2	0	1	0	1	2
Sugarbeets	0	0	0	0	0	0	0	2
Velvetleaf	-	0	0	0	0	0	2	2
Wheat	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	2	0	0

Table B

Rate 31 g/ha	COMPOUND 4	22	23	26	27	28	29	30	31	32	33	98	100	146	155	156	200	213	217	221	225	244	250	252	256
Preemergence																									
B. signalgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	2	0	0	0	0	0
Bedstraw	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	-	0	0	0	0
Blackgrass	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	5	0	0	0	0	0
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	3	3	0	0	0	2	0	2	2	0	3	2	0	5	0	0	0	0	0	2	2	0	0	0	0
Giant foxtail	8	3	1	0	0	0	0	2	1	1	3	4	0	9	0	0	0	0	3	5	8	0	7	3	0
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	-	-	-
Rape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	7	6	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0

Table B

Rate 31 g/ha	COMPOUND 264	285	287	288	289	290	291	295	296	318	324	362	392	442	450	481	483	518	548	614	644	656
Preemergence																						
B. signalgrass	0	0	3	0	2	0	0	3	0	0	0	2	0	0	0	7	0	0	0	0	0	0
Bedstraw	0	0	4	0	0	0	0	0	0	-	0	8	0	-	-	0	0	0	9	0	-	-
Blackgrass	0	0	7	0	6	0	0	4	0	0	0	8	2	0	0	3	0	4	0	0	0	2
Cocklebur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crabgrass	0	0	2	0	1	0	0	2	0	0	0	-	8	5	0	7	0	0	4	0	2	6
Giant foxtail	0	7	9	0	9	2	8	8	0	0	0	-	10	0	0	8	0	0	9	0	0	4
Morningglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rape	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	0	0	4	0	5	0	0	0	0	0	0	3	0	0	0	0	0	2	0	0	0	0
Soybean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sugarbeets	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Velvetleaf	0	0	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0

Wheat	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Wild oats	0	0	1	0	0	0	0	0	0	0	0	7	2	0	0	4	0	4	0	0	0	0

Table B	COMPOUND				
Rate 31 g/ha	716	722	727	776	779
Preemergence					
B. signalgrass	0	0	0	-	-
Bedstraw	0	0	0	0	0
Blackgrass	0	0	0	0	0
Cockl bur	0	0	0	0	0
Corn	0	0	0	0	0
Crabgrass	0	0	3	5	8
Giant foxtail	0	0	5	5	9
Morningglory	0	0	0	0	0
Nutsedge	0	0	0	0	0
Rape	0	0	0	0	0
Redroot pigweed	0	0	0	0	0
Soybean	0	0	0	0	0
Sugarbeets	0	0	0	0	0
Velvetleaf	0	0	0	0	0
Wheat	0	0	0	0	0
Wild oats	0	0	0	2	0

Table B	COMPOUND		
Rate 16 g/ha	287	290	291
Pre-emergence			
Barnyardgrass	0	0	0
Ducksalad	0	0	0
Rice	0	0	0
S. Flatsedge	0	0	0

Table B	COMPOUND			
Rate 16 g/ha	287	290	291	779
Postemergence				
B. signalgrass	0	0	0	0
Barnyardgrass	-	-	-	-
Bedstraw	0	0	0	0
Blackgrass	0	0	0	0
Cocklebur	0	0	0	0
Corn	0	0	0	0
Crabgrass	0	0	0	2
Ducksalad	-	-	-	-
Giant foxtail	0	0	0	2
Morningglory	2	3	1	5
Nutsedge	0	0	0	0
Rape	0	0	0	0
Redroot pigweed	0	0	0	2
Rice	-	-	-	-
S. Flatsedge	-	-	-	-
Soybean	1	1	1	2
Sugarbeets	0	0	0	2
Velvetleaf	0	0	0	2
Wheat	0	0	0	0
Wild oats	0	0	0	0

Table B	COMPOUND			
Rate 16 g/ha	287	290	291	779
Preemergence				
B. signalgrass	0	0	0	-
Bedstraw	0	0	0	0
Blackgrass	0	0	0	0
Cocklebur	0	0	0	0
Corn	0	0	0	0
Crabgrass	0	0	0	3
Giant foxtail	8	2	7	3
Morningglory	0	0	0	0
Nutsedge	0	0	0	0
Rape	0	0	0	0
Redroot pigweed	0	0	0	0
Soybean	0	0	0	0
Sugarbeets	0	0	0	0
Velvetleaf	1	0	0	0
Wheat	0	0	0	0
Wild oats	0	0	0	0

TEST C

Compounds evaluated in this test were formulated in a non-phytotoxic solvent mixture which included a surfactant and applied to plants that were grown for various periods of time before treatment (postemergence application). A mixture of sandy loam soil and greenhouse potting mix in a 60:40 ratio was used for the postemergence test.

Plantings of these crops and weed species were adjusted to produce plants of appropriate size for the postemergence test. All plant species were grown using normal greenhouse practices. Crop and weed species include arrowleaf sida (*Sida rhombifolia*), barnyardgrass (*Echinochloa crus-galli*), cocklebur (*Xanthium strumarium*), common ragweed (*Ambrosia elatior*), corn (*Zea mays*), cotton (*Gossypium hirsutum*), eastern black nightshade (*Solanum ptycanthum*), fall panicum (*Panicum dichotomiflorum*), field bindweed (*Convolvulus arvensis*), giant foxtail (*Setaria faberii*), hairy beggarticks (*Bidens pilosa*), ivyleaf morningglory (*Ipomoea hederacea*), johnsongrass (*Sorghum halepense*), ladysthumb smartweed (*Polygonum persicaria*), lambsquarters (*Chenopodium album*), large crabgrass (*Digitaria sanguinalis*), purple nutsedge (*Cyperus rotundus*), redroot pigweed (*Amaranthus retroflexus*), soybean (*Glycine max*), surinam grass (*Brachiaria decumbens*), velvetleaf (*Abutilon theophrasti*) and wild poinsettia (*Euphorbia heterophylla*).

Treated plants and untreated controls were maintained in a greenhouse for approximately 14 to 21 days, after which all treated plants were compared to untreated controls and visually evaluated. Plant response ratings, summarized in Table C, were based upon a 0 to 100 scale where 0 was no effect and 100 was complete control. A dash response (-) means no test result.

Table C

	COMPOUND													
Rate 1120 g/ha	80	93	94	103	107	109	113	116	117	131	132	138	146	242
Postemergence														
Arrowleaf sida	30	60	80	-	85	95	95	90	50	60	80	70	90	90
Barnyardgrass	20	95	65	80	95	95	95	90	90	95	95	85	95	95
Cocklebur	50	-	-	0	-	-	50	50	0	10	0	0	70	20
Common ragweed	5	20	5	5	50	20	20	0	50	0	0	-	30	80
Corn	0	45	0	0	60	55	60	20	85	40	10	60	50	20
Cotton	40	85	80	80	90	70	80	-	60	65	40	70	70	70
E. blacknightsh	60	85	95	0	95	95	95	50	80	80	0	70	85	90
Fall panicum	10	90	70	30	85	95	85	90	80	90	50	90	90	90
Field bindweed	0	50	0	0	60	10	50	50	40	60	70	50	0	0
Giant foxtail	20	95	40	40	95	85	80	85	80	80	0	85	85	85
H. beggarticks	10	70	20	5	95	85	50	-	0	70	-	80	85	90
I. morningglory	50	70	-	10	95	70	50	20	0	50	0	0	50	0
Johnsongrass	0	90	0	0	90	95	95	80	85	70	60	90	90	90
Ladysthumb	70	-	90	10	-	95	85	-	-	-	-	-	-	-
Lambsquarters	20	40	30	20	40	70	50	0	0	0	0	20	50	0
Large crabgrass	10	95	-	10	95	90	95	90	80	85	80	85	80	85
Purple nutsedge	0	10	0	0	10	0	10	10	80	80	0	70	0	80
Redroot pigweed	80	85	0	85	80	85	90	20	30	30	30	70	20	50
Soybean	-	85	55	35	85	85	85	40	60	45	40	40	85	65
Surinam grass	10	85	10	5	95	95	90	90	90	90	30	90	95	90

Velvetleaf	20	70	40	45	75	75	75	80	60	70	0	80	60	60
Wild poinsettia	5	70	85	60	80	90	95	-	0	80	0	70	70	85
Table C							COMPOUND							
Rate 560 g/ha	80	93	94	103	107	109	113	116	117	131	132	138	146	242
Postemergence														
Arrowleaf sida	-	60	80	0	75	85	70	85	0	30	10	-	85	70
Barnyardgrass	20	90	30	10	90	85	85	90	90	95	80	85	85	90
Cocklebur	50	40	-	0	-	60	50	0	0	0	0	0	70	0
Common ragweed	5	10	5	0	50	10	-	0	20	0	0	0	30	80
Corn	0	0	0	0	55	5	45	15	40	5	0	50	5	0
Cotton	40	70	70	40	80	70	50	50	30	40	20	40	65	45
E. blacknightsh	50	-	75	0	70	-	-	10	70	50	0	70	85	60
Fall panicum	0	90	10	0	85	80	85	85	40	90	50	60	90	90
Field bindweed	0	0	0	0	30	10	50	50	30	0	40	0	0	0
Giant foxtail	0	80	10	0	95	80	80	60	75	60	0	80	80	80
H. beggarticks	10	5	5	0	70	70	30	90	-	40	-	-	85	-
I. morningglory	30	10	90	0	30	50	50	0	0	20	0	0	20	0
Johnsongrass	0	85	0	0	90	60	60	60	40	60	0	60	60	60
Ladysthumb	70	80	85	10	30	30	85	-	-	-	-	-	85	-
Lambsquarters	20	10	10	5	40	30	20	0	0	-	0	10	10	0
Large crabgrass	10	50	70	0	95	90	95	30	60	70	40	85	60	85
Purple nutsedge	0	0	0	0	10	0	0	10	10	0	0	50	0	10
Redroot pigweed	50	10	0	70	80	70	0	0	0	20	-	40	-	10
Soybean	60	80	30	35	85	85	85	30	40	30	30	30	60	25
Surinam grass	0	50	0	0	80	50	90	-	40	85	0	85	50	85
Velvetleaf	20	40	20	10	70	50	60	40	20	10	0	70	40	40
Wild poinsettia	5	30	60	10	40	50	80	0	0	30	0	0	50	0
Table C							COMPOUND							
Rate 280 g/ha	80	93	94	103	107	109	113	116	117	131	132	138	146	242
Postemergence														
Arrowleaf sida	5	10	10	0	30	70	40	-	0	10	0	-	45	30
Barnyardgrass	10	90	0	0	85	85	80	85	80	70	50	70	80	85
Cocklebur	10	35	0	0	50	30	50	-	0	0	0	0	40	0
Common ragweed	0	10	0	0	50	10	5	0	0	0	0	0	-	10
Corn	0	0	0	0	5	0	40	0	0	0	0	20	0	0
Cotton	35	30	70	20	60	50	15	50	10	10	10	30	65	20
E. blacknightsh	5	40	40	0	50	80	50	0	0	10	0	10	30	40
Fall panicum	0	80	0	0	60	50	80	60	-	40	30	0	60	85
Field bindweed	0	0	0	0	0	0	0	0	30	0	0	0	0	-
Giant foxtail	0	55	0	0	70	80	70	60	60	40	0	15	40	60
H. beggarticks	-	0	0	0	60	5	30	-	-	-	0	10	20	-
I. morningglory	10	10	10	0	30	50	50	0	0	0	0	0	20	0
Johnsongrass	0	5	0	0	50	10	20	40	35	40	0	20	30	45
Ladysthumb	10	0	10	0	-	10	0	-	-	-	-	-	10	-
Lambsquarters	15	10	5	5	0	10	-	-	0	0	0	0	5	0
Large crabgrass	0	30	0	0	85	60	85	0	20	20	10	10	60	30
Purple nutsedge	0	0	0	0	0	0	10	0	0	0	0	0	0	0
Redroot pigweed	0	-	-	60	75	40	0	0	0	10	10	10	-	0
Soybean	20	60	15	30	70	70	70	10	35	25	20	30	50	25
Surinam grass	0	45	0	0	70	5	40	0	0	80	0	40	5	40
Velvetleaf	5	5	5	5	60	20	0	0	-	0	0	60	40	0
Wild poinsettia	0	0	0	0	15	30	50	0	0	10	0	0	40	0
Table C							COMPOUND							
Rate 140 g/ha	80	93	94	103	107	109	113	116	117	131	132	138	146	242
Postemergence														
Arrowleaf sida	0	-	-	0	-	60	30	0	0	-	0	0	40	10
Barnyardgrass	0	70	0	0	70	60	80	55	70	70	50	40	60	80

Cocklebur	5	0	0	0	0	30	5	0	0	0	0	0	40	0
Common ragweed	0	5	0	0	0	5	5	0	0	0	0	0	10	0
Corn	0	0	0	0	0	0	0	0	0	0	0	-	0	0
Cotton	20	15	20	0	45	10	10	10	5	10	5	5	40	0
E. blacknightsh	0	10	0	0	50	50	50	0	0	0	0	0	0	0
Fall panicum	0	0	0	0	50	50	60	10	0	0	0	0	50	30
Field bindweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Giant foxtail	0	10	0	0	-	50	20	-	0	10	0	0	0	40
H. beggarticks	0	-	0	0	5	-	5	80	-	0	0	-	10	-
I. morningglory	0	5	0	0	10	0	10	0	0	0	0	0	0	0
Johnsongrass	0	0	0	0	35	0	0	10	10	15	0	0	0	45
Ladysthumb	10	0	5	0	0	-	0	-	-	-	-	-	0	-
Lambsquarters	0	10	0	0	0	10	0	0	0	0	0	0	0	0
Large crabgrass	0	0	0	0	70	10	0	0	0	0	0	0	0	10
Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redroot pigweed	-	5	-	0	-	0	0	0	0	10	0	0	0	0
Soybean	5	40	15	30	45	35	40	10	10	20	5	10	40	20
Surinam grass	0	0	0	0	10	0	0	0	0	0	0	10	0	0
Velvetleaf	5	0	5	0	5	10	0	0	0	0	0	0	0	0
Wild poinsettia	0	0	0	0	0	10	10	0	0	0	0	0	0	0

TEST D

Seeds, tubers, or plant parts of Alexandergrass (*Brachiaria plantaginea),* bermudagrass (*Cynodon dactylon*), common purslane (*Portulaca oleracea*), common ragweed (*Ambrosia elatior*), common groundsel (*Senecio vulgaris*), dallisgrass (*Paspalum dilatatum*), goosegrass (*Eleusine indica*), guineagrass (*Panicum maximum*), itchgrass (*Rottboellia exaltata*), Johnson grass (*Sorghum halepense*), large crabgrass (*Digitaria sanguinalis*), pitted morningglory (*Ipomoea lacunosa*), purple nutsedge (*Cyperus rotundus*), sandbur (*Cenchrus echinatus*), sourgrass (*Trichachne insularis*), Spanishneedles (*Bidens bipinnata*), surinam grass (*Brachiaria decumbens*) and tall mallow (*Malva sylvestris*) were planted into greenhouse pots of flats containing greenhouse planting medium. Plant species were grown in separate pots or individual compartments. Preemergence applications were made within one day of planting the seed or plant part.

Test chemicals were formulated in a non-phytotoxic solvent mixture which included a surfactant and applied preemergence to the surface of the pot containing seeds in a sandy loam soil. Untreated control pots and treated pots were placed in the greenhouse for growth and visually evaluated for injury 14 to 21 days after herbicide application. Plant response ratings, summarized in Table C, are based on a 0 to 100 scale where 0 is no injury and 100 is complete control. A dash (-) response means no test result.

Table D	COMPOUND		
Rate 500 g/ha	146	147	299
Postemergence			
Alexandergrass	65	75	100
Bermudagrass	35	40	100
C. purslane	20	10	0
C. ragweed	40	0	100
Com. groundsel	0	0	100
Dallisgrass	80	85	100
Goosegrass	80	65	100
Green foxtail	-	-	100
Guineagrass	60	60	100

Table D	COMPOUND		
Itchgrass	65	65	100
Johnsongrass	65	70	100
Large crabgrass	65	60	100
P. morninglory	65	30	0
Purple nutsedge	35	60	100
Sandbur	80	90	100
Sourgrass	80	80	-
Spanishneedles	20	20	100
Surinam grass	80	70	100
Tall Mallow	50	20	100

Table D	COMPOUND																					
Rate 500 g/ha	4	24	30	36	46	78	93	94	103	105	107	108	109	110	112	115	117	131	138	146	147	151
Preemergence																						
Alexandergrass	100	98	90	98	80	100	100	80	95	100	100	100	100	100	100	100	98	100	100	100	100	100
Bermudagrass	98	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	100	0	0	0
C. ragweed	0	0	0	10	0	0	80	10	0	0	100	80	55	0	0	20	65	100	100	75	0	20
Com. groundsel	-	0	100	100	0	0	100	100	0	80	100	100	0	20	10	98	100	100	100	100	0	100
Dallisgrass	98	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Goosegrass	100	100	98	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Green foxtail	-	-	100	100	100	100	100	100	100	100	100	100	100	100	0	100	100	100	100	100	-	100
Guineagrass	100	100	98	100	85	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Itchgrass	80	40	-	80	10	20	100	40	0	85	100	100	100	40	80	50	100	100	100	100	85	100
Johnsongrass	30	85	40	0	60	20	85	20	40	90	100	85	100	45	50	90	100	100	100	95	95	100
Large crabgrass	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P. morninglory	0	0	0	0	0	0	20	0	0	0	100	0	100	0	10	10	40	100	65	20	30	20
Purple nutsedge	0	0	0	0	0	0	100	50	10	75	85	30	85	0	40	0	100	85	80	100	85	70
Sandbur	100	100	100	100	0	80	100	100	100	100	100	100	100	98	100	100	100	100	100	100	80	100
Sourgrass	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	-
Spanishne dles	0	0	0	10	20	0	45	0	20	0	100	20	30	0	10	10	0	90	75	100	30	40
Surinam grass	98	65	85	85	30	98	100	90	40	100	100	100	100	85	98	85	100	100	100	100	100	100
Tall Mallow	30	0	0	0	10	0	98	20	0	75	100	98	100	0	20	0	100	100	100	100	70	85

Table D	COMPOUND	
Rate 500 g/ha	170	242
Preemergence		
Alexandergrass	100	100
Bermudagrass	100	100
C. purslane	10	0
C. ragweed	45	100
Com. groundsel	100	-
Dallisgrass	100	100
Goosegrass	100	100
Green foxtail	100	100
Guineagrass	100	100
Itchgrass	50	100
Johnsongrass	95	100

Large crabgrass	100	100
P. morninglory	85	100
Purple nutsedge	65	60
Sandbur	98	100
Sourgrass	-	-
Spanishneedles	85	40
Surinam grass	100	100
Tall Mallow	45	85

Table D

	COMPOUND														
Rate 250 g/ha	131	146	147	241	242	243	299	342	343	348	349	352	357	358	360
Postemergence															
Alexandergrass	100	40	50	100	100	100	100	80	100	100	90	100	100	100	100
Bermudagrass	100	0	20	100	100	100	100	100	100	100	100	100	100	100	100
C. purslan	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	100	30	0	100	100	60	100	100	90	20	20	100	50	70	30
Com. groundsel	100	0	0	100	100	100	100	0	100	100	50	100	100	40	100
Dallisgrass	100	60	85	100	100	100	100	100	100	100	90	100	100	100	100
Goosegrass	100	30	50	100	100	100	100	100	100	100	90	100	100	100	100
Green foxtail	100	-	-	100	100	100	100	100	100	100	100	100	100	100	100
Guineagrass	100	35	50	100	100	100	100	90	100	80	40	100	100	100	100
Itchgrass	100	50	50	100	100	100	50	0	30	100	0	60	50	100	30
Johnsongrass	100	50	60	0	90	100	100	0	100	90	40	80	90	100	70
Large crabgrass	100	50	-	100	100	100	100	100	100	100	100	100	100	100	100
P. morninglory	100	50	30	0	0	40	0	0	0	0	0	0	0	0	10
Purple nutsedge	100	0	35	0	100	100	0	0	0	0	0	0	50	10	20
Sandbur	100	85	35	90	100	100	100	0	50	100	80	100	100	90	100
Sourgrass	-	80	80	-	-	-	-	-	-	-	-	-	-	-	-
Spanishn edles	60	10	0	10	100	100	20	0	20	0	0	30	20	0	20
Surinam grass	100	-	80	100	100	100	100	40	100	100	60	100	100	50	100
Tall Mallow	100	0	0	40	100	60	70	10	30	40	0	20	100	80	90

Table D

	COMPOUND																					
Rate 250 g/ha	4	24	28	30	34	46	78	93	103	105	107	108	109	110	112	115	119	131	138	146	147	151
Preemergence																						
Alexandergrass	90	65	75	80	60	75	75	100	85	98	100	100	100	100	80	85	100	100	98	100	90	100
Bermudagrass	98	100	100	98	100	100	100	100	100	100	100	100	100	100	98	100	100	100	100	90	100	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	100	0	0	0

C. ragw ed	0	0	0	0	0	0	0	0	0	0	100	0	10	0	0	20	0	100	60	60	0	20
Com. groundsel	-	0	0	0	0	0	0	0	0	0	100	100	0	20	0	10	100	100	100	85	0	100
Dallisgrass	98	98	100	80	100	100	100	100	98	100	100	100	100	100	100	98	98	100	100	100	100	100
Goos grass	98	98	100	85	98	98	98	100	98	100	100	100	100	100	100	100	100	100	100	100	100	100
Green foxtail	-	-	-	100	-	100	100	100	100	100	100	100	100	100	98	100	100	100	100	100	-	100
Guineagrass	100	98	98	98	98	65	100	100	90	100	100	100	100	100	90	98	98	100	100	100	100	100
Itchgrass	80	40	40	75	20	0	10	90	0	85	100	98	100	40	0	50	75	100	100	100	75	100
Johnsongrass	30	85	0	0	30	40	20	95	0	75	98	85	100	20	0	75	85	98	100	90	95	50
Large crabgrass	100	100	100	98	100	100	100	100	98	100	100	100	100	100	100	100	100	100	100	100	100	100
P. morninglory	0	0	0	0	0	0	0	0	0	0	75	0	85	0	0	0	0	85	65	0	0	0
Purple nutsedge	0	0	0	0	0	0	0	30	0	0	85	10	75	0	0	0	0	85	75	75	40	65
Sandbur	90	20	0	40	40	0	75	100	75	98	100	98	100	98	0	50	100	100	98	100	85	100
Sourgrass	100	100	100	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	-
Spanishneedles	0	0	75	0	40	10	0	0	20	0	100	0	30	0	0	10	10	75	30	100	10	0
Surinam grass	85	10	75	85	20	10	85	98	0	98	100	98	100	70	0	75	98	100	98	100	90	100
Tall Mallow	30	0	0	0	0	10	0	90	0	75	98	45	98	0	0	0	0	90	70	90	30	85

Table D	COMPOUND	
Rate 250 g/ha	170	242
Preemergence		
Alexandergrass	98	100
Bermudagrass	100	100
C. purslane	0	0
C. ragweed	40	100
Com. groundsel	45	-
Dallisgrass	100	100
Goosegrass	98	100
Green foxtail	100	100
Guineagrass	100	100
Itchgrass	45	98
Johnsongrass	100	98
Large crabgrass	100	100
P. morninglory	65	20
Purple nutsedge	65	60
Sandbur	40	100
Sourgrass	-	-
Spanishneedles	40	10

Surinam grass	100	100
Tall Mallow	40	60

Table D

	COMPOUND														
Rate 125 g/ha	131	146	147	241	242	243	299	342	343	348	349	352	357	358	360
Postemerg nce															
Alexandergrass	100	20	35	100	100	100	100	70	100	100	70	100	100	90	100
Bermudagrass	100	0	0	100	100	100	100	100	100	100	100	100	100	100	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	90	0	0	100	90	10	50	0	60	0	0	20	0	70	30
Com. groundsel	100	0	0	100	90	100	100	0	100	100	20	100	100	-	100
Dallisgrass	100	30	70	90	100	100	100	90	90	100	60	100	100	100	100
Goosegrass	100	35	50	100	100	100	100	100	90	100	100	100	100	100	100
Green foxtail	100	-	-	100	100	100	100	60	100	100	80	100	100	100	100
Guineagrass	100	10	30	100	100	100	80	50	50	100	0	80	70	100	100
Itchgrass	100	30	50	100	80	10	10	0	20	0	0	20	30	0	20
Johnsongrass	60	35	50	0	30	30	60	0	20	20	10	40	60	0	50
Large crabgrass	100	20	60	100	100	100	100	100	100	100	100	100	100	100	100
P. morninglory	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0
Purple nutsedge	30	0	0	0	0	10	0	0	0	0	0	0	0	0	10
Sandbur	100	-	0	100	100	30	100	-	50	60	20	100	0	100	100
Sourgrass	-	50	30	-	-	-	-	-	-	-	-	-	-	-	-
Spanishn edles	70	10	0	0	0	20	0	0	0	0	0	40	10	0	0
Surinam grass	100	-	20	100	100	100	100	30	70	80	10	70	100	50	90
Tall Mallow	90	0	0	10	90	40	90	0	0	20	0	30	50	70	60

Table D

	COMPOUND																					
Rate 125 g/ha	4	18	24	28	30	34	46	78	93	94	103	105	107	108	109	113	114	115	117	119	131	138
Preemergence																						
Alexandergrass	80	30	10	60	50	30	65	75	85	50	40	98	100	98	100	98	98	75	90	98	100	80
Bermudagrass	30	100	98	100	98	100	100	98	100	90	80	100	100	100	100	100	100	100	100	100	100	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
C. ragweed	0	0	0	0	0	0	0	0	10	0	0	0	85	0	10	0	0	10	0	0	30	30
Com. groundsel	-	0	0	0	0	0	0	0	35	75	0	0	100	100	0	100	85	10	75	100	100	100
Dallisgrass	98	100	98	85	60	98	100	100	98	98	65	100	100	100	100	100	100	98	95	90	100	100
Goos grass	98	85	98	98	85	85	85	98	100	85	85	98	100	100	100	100	100	98	100	100	100	100
Green foxtail	-	85	-	-	85	-	40	100	100	90	100	100	100	100	100	100	100	100	100	100	100	100
Guineagrass	90	65	90	75	75	85	30	85	100	0	85	98	100	98	100	100	100	85	100	98	100	100

Itchgrass	0	0	40	40	75	0	0	0	75	0	0	20	98	40	75	60	20	50	75	60	90	80
Johnsongrass	0	0	0	0	0	20	40	0	75	0	0	20	90	40	98	90	0	60	90	75	90	65
Large crabgrass	100	100	100	100	98	100	98	100	100	98	95	100	100	100	100	100	100	100	98	100	100	100
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	0	30	0	65	10	0	0	20	0	50	65
Purple nutsedge	0	0	0	0	0	0	0	0	0	50	0	0	65	10	40	30	20	0	0	0	60	65
Sandbur	30	0	20	0	40	30	0	0	65	20	0	0	98	98	100	100	85	40	0	98	100	65
Sourgrass	100	-	100	100	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spanishneedles	40	0	0	75	0	0	10	0	10	0	0	0	20	0	10	0	0	0	0	10	60	10
Surinam grass	90	20	10	65	40	0	0	30	90	80	0	40	100	98	98	100	75	75	100	85	100	85
Tall Mallow	0	0	0	0	0	0	10	0	30	0	0	45	90	10	85	30	10	0	65	0	80	40

Table D	COMPOUND				
Rate 125 g/ha	146	147	151	170	242
Preemergence					
Alexandergrass	98	85	98	85	98
Bermudagrass	90	98	100	100	98
C. purslane	0	0	0	0	0
C. ragweed	0	0	0	0	100
Com. groundsel	75	0	100	45	-
Dallisgrass	100	98	100	85	98
Goosegrass	100	98	100	75	100
Green foxtail	100	-	100	100	100
Guineagrass	100	90	100	100	100
Itchgrass	90	65	85	30	80
Johnsongrass	80	85	50	75	85
Large crabgrass	100	100	100	100	100
P. morninglory	0	0	0	40	20
Purple nutsedge	70	30	30	0	40
Sandbur	100	0	100	40	90
Sourgrass	100	100	-	-	-
Spanishn edles	90	10	0	0	10
Surinam grass	100	85	100	75	90
Tall Mallow	80	0	75	30	0

Table D	COMPOUND															
Rate 64 g/ha	131	146	147	169	241	242	243	299	342	343	348	349	352	357	358	360
Postemergence																
Alexandergrass	100	10	20	65	10	90	20	90	0	50	70	40	80	100	100	50

Bermudagrass	100	0	0	100	100	100	100	90	90	60	100	70	100	100	100	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	0	0	0	0	20	30	10	100	0	0	0	0	20	0	-	30
Com. groundsel	100	0	0	65	0	90	0	100	-	100	50	-	50	100	0	0
Dallisgrass	100	-	10	90	50	90	70	100	0	90	90	0	80	100	100	100
Goosegrass	100	0	0	100	100	100	100	90	90	90	100	100	100	100	100	100
Green foxtail	100	-	-	100	10	100	100	100	0	100	100	10	100	100	100	100
Guineagrass	100	10	0	0	100	80	0	20	0	80	0	0	20	60	20	100
Itchgrass	20	30	0	0	0	40	0	0	0	20	0	0	0	0	0	0
Johnsongrass	30	20	0	0	0	40	0	0	0	20	0	0	0	0	0	0
Large crabgrass	100	20	10	100	100	100	100	100	40	90	100	70	100	100	100	100
P. morninglory	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sandbur	100	0	0	40	20	50	30	90	0	0	20	0	70	0	100	50
Sourgrass	-	50	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Spanishneedles	0	10	0	0	0	0	50	0	0	0	0	0	0	10	0	0
Surinam grass	60	-	-	65	60	100	90	50	20	20	20	0	30	80	0	100
Tall Mallow	40	0	0	0	0	50	30	30	0	0	0	0	30	20	50	40

Table D

	COMPOUND																					
Rate 64 g/ha	4	18	24	28	30	34	46	78	93	103	105	107	108	109	112	113	115	117	119	130	131	132
Preemergence																						
Alexandergrass	80	0	10	0	40	20	40	30	30	0	85	100	85	98	0	98	50	90	75	98	98	98
Bermudagrass	0	85	95	100	98	98	98	90	90	60	98	100	100	100	85	100	98	98	100	100	100	100
C. purslane	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
C. ragweed	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	30	30	0
Com. groundsel	-	0	0	0	0	0	0	0	0	0	0	98	85	0	0	100	10	0	100	0	85	0
Dallisgrass	90	85	30	75	50	80	40	75	98	45	98	100	100	100	70	100	75	85	85	100	100	98
Goosegrass	95	85	50	85	70	75	75	85	98	65	98	100	98	100	85	100	90	85	98	100	100	98
Green foxtail	-	85	-	-	85	-	30	85	100	50	100	100	100	100	85	100	85	100	90	100	100	100
Guineagrass	50	30	75	65	40	80	30	65	100	0	98	100	98	100	40	100	30	100	85	100	100	85
Itchgrass	75	0	40	20	40	0	0	0	60	0	20	85	30	75	0	50	40	40	50	80	90	10
Johnsongrass	30	0	0	0	0	0	0	0	40	0	0	90	20	75	0	80	40	90	65	65	65	35
Large crabgrass	98	98	70	98	85	98	40	98	98	85	100	100	100	100	10	100	85	98	98	100	100	100
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	10	0	0	0	65	0	0
Purple nutsedge	0	0	0	0	0	0	0	0	20	0	0	20	0	40	0	20	0	0	0	0	40	0
Sandbur	65	0	20	0	0	0	0	0	65	0	0	65	30	98	0	75	0	0	65	100	85	0

Sourgrass	90	-	100	85	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spanishneedles	0	0	0	60	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	60	40	0
Surinam grass	65	0	10	0	40	0	0	20	85	0	0	100	65	85	0	98	65	80	50	80	85	30
Tall Mallow	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	0	40	0	85	80	40

Table D	COMPOUND						
Rate 64 g/ha	138	139	146	147	151	170	242
Preemerg nce							
Alexandergrass	80	60	95	75	98	30	100
Bermudagrass	100	98	95	95	90	100	85
C. purslane	0	0	0	0	0	0	0
C. ragweed	10	0	0	0	0	0	100
Com. groundsel	40	0	0	0	0	0	-
Dallisgrass	100	90	98	80	100	85	98
Goosegrass	98	98	100	98	100	75	95
Green foxtail	100	98	100	-	100	100	100
Guineagrass	100	65	100	85	100	98	98
Itchgrass	30	20	90	20	75	0	70
Johnsongrass	40	10	60	20	40	0	40
Large crabgrass	100	90	100	98	100	100	100
P. morninglory	65	30	0	0	0	20	10
Purple nutsedge	30	0	65	0	0	0	0
Sandbur	65	40	100	0	90	40	0
Sourgrass	-	-	100	98	-	-	-
Spanishne dles	10	20	85	0	0	0	0
Surinam grass	40	20	60	75	85	30	85
Tall Mallow	40	20	50	0	0	30	0

Table D	COMPOUND											
Rate 32 g/ha	131	241	242	243	342	343	348	349	352	357	358	360
Postemergence												
Alexandergrass	50	10	50	0	0	0	0	0	60	20	0	60
Bermudagrass	90	30	100	60	30	80	20	40	80	100	90	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0
C. ragw ed	0	0	30	0	0	0	0	0	0	-	0	0
Com. groundsel	100	0	100	0	0	40	-	-	0	40	0	-
Dallisgrass	60	40	90	50	0	30	50	0	70	20	30	40
Goosegrass	100	100	100	80	30	80	90	20	90	100	20	100

Green foxtail	60	10	100	100	0	100	20	0	100	30	30	70
Guineagrass	20	0	100	0	0	0	0	0	0	0	0	100
Itchgrass	0	0	0	0	0	0	0	0	0	0	0	0
Johnsongrass	0	0	0	0	0	0	0	0	0	0	0	0
Large crabgrass	100	70	100	70	0	30	60	0	100	100	40	80
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	0
Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0
Sandbur	0	40	30	20	0	0	0	0	90	0	20	90
Sourgrass	-	-	-	-	-	-	-	-	-	-	-	-
Spanishneedles	0	0	0	50	0	0	0	0	0	10	0	-
Surinam grass	40	0	30	20	0	20	0	0	0	20	0	0
Tall Mallow	30	0	0	20	0	0	0	0	0	10	30	0

Table D								COMPOUND														
Rate 32 g/ha	4	18	24	28	30	34	46	78	93	103	105	107	108	109	112	113	115	119	131	146	147	151
Preemergence																						
Alexandergrass	20	0	10	0	0	0	0	0	10	0	30	90	20	90	0	85	20	50	90	85	0	40
Bermudagrass	0	60	75	85	65	85	85	85	80	30	98	100	98	100	75	100	98	65	100	100	85	90
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Com. groundsel	-	0	0	0	0	0	0	0	0	0	0	75	75	0	0	65	0	98	75	0	0	0
Dallisgrass	85	0	30	30	0	0	40	0	98	20	98	85	50	98	65	95	75	65	95	90	60	85
Goosegrass	85	0	50	0	40	0	20	10	98	30	98	98	85	98	40	100	85	85	98	98	65	85
Green foxtail	-	0	-	-	50	-	0	75	75	0	85	100	100	100	0	98	70	75	100	-	-	100
Guineagrass	20	0	60	40	30	30	0	20	75	0	85	75	85	100	0	100	30	75	100	95	0	90
Itchgrass	0	0	40	0	20	0	0	0	60	0	0	75	20	65	0	40	40	10	50	90	0	0
Johnsongrass	0	0	0	0	0	0	0	0	0	0	0	85	20	0	0	60	40	0	40	60	0	0
Large crabgrass	100	0	70	85	40	85	20	40	98	0	98	98	100	100	10	100	75	90	100	100	98	98
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0
Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0
Sandbur	0	0	20	0	0	0	0	0	0	0	0	30	0	0	0	65	0	0	60	85	0	20
Sourgrass	65	-	40	60	-	98	-	-	-	-	-	-	-	-	-	-	-	-	-	98	75	-
Spanishneedles	-	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	75	0	0
Surinam grass	0	0	10	0	40	0	0	0	0	0	0	75	65	30	0	90	20	0	75	60	0	30
Tall Mallow	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	30	40	0	0

Table D	COMPOUND	
Rate 32 g/ha	170	242

Preemergence		
Alexandergrass	20	85
Bermudagrass	90	85
C. purslane	0	0
C. ragweed	0	100
Com. groundsel	0	-
Dallisgrass	0	85
Goosegrass	65	85
Green foxtail	75	100
Guineagrass	85	85
Itchgrass	0	65
Johnsongrass	0	40
Large crabgrass	85	100
P. morninglory	20	0
Purple nutsedge	0	0
Sandbur	0	0
Sourgrass	-	-
Spanishneedles	0	0
Surinam grass	0	85
Tall Mallow	30	0

Table D

	COMPOUND											
Rate 16 g/ha	131	241	242	243	342	343	348	349	352	357	358	360
Postemergence												
Alexandergrass	0	0	0	0	0	0	0	0	0	0	0	20
Bermudagrass	30	0	90	20	20	0	0	0	0	90	0	0
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	0	0	50	0	-	0	0	0	-	0	0	0
Com. groundsel	90	-	0	0	-	0	30	-	-	-	0	-
Dallisgrass	20	0	60	0	0	0	0	0	0	0	0	0
Goosegrass	90	0	90	70	20	40	50	0	0	90	0	20
Gre n foxtail	0	0	30	10	0	0	0	0	0	10	0	0
Guineagrass	0	0	0	0	0	0	0	0	0	0	0	0
Itchgrass	0	0	0	0	0	0	0	0	0	0	0	0
Johnsongrass	0	80	0	0	0	0	0	0	0	0	0	0
Large crabgrass	90	0	0	0	0	0	20	0	0	100	0	0
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	0

Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0
Sandbur	0	0	20	10	0	0	0	0	0	0	0	0
Sourgrass	-	-	-	-	-	-	-	-	-	-	-	-
Spanishne dles	0	0	0	0	0	0	0	0	0	10	0	0
Surinam grass	0	0	0	0	0	0	0	0	0	0	0	0
Tall Mallow	0	0	0	50	0	0	0	0	0	10	0	0

Table D	COMPOUND																				
Rate 16 g/ha	4	18	30	46	78	93	103	105	107	108	109	112	113	115	119	131	146	147	151	170	242
Preemergence																					
Alexandergrass	20	0	0	0	0	0	0	0	0	20	40	0	65	0	0	20	65	0	40	20	65
Bermudagrass	0	40	50	65	75	80	30	85	85	85	98	60	98	75	50	100	65	0	90	80	80
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Com. groundsel	-	0	0	0	0	0	0	0	40	65	0	0	0	0	85	75	65	0	0	0	-
Dallisgrass	75	0	0	20	0	60	10	60	30	40	40	30	0	0	30	85	80	0	100	0	65
Goosegrass	70	0	30	0	10	65	0	85	85	60	85	40	90	20	30	75	90	0	85	50	75
Green foxtail	-	0	0	0	0	65	0	75	100	40	98	0	80	0	10	90	-	-	100	65	80
Guineagrass	20	0	30	0	20	65	0	40	65	0	90	0	85	0	65	0	90	0	85	0	70
Itchgrass	0	0	20	0	0	50	0	0	40	0	0	0	10	40	0	30	85	0	0	0	65
Johnsongrass	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	10	60	0	0	0	10
Large crabgrass	100	0	40	0	0	90	0	40	85	85	85	10	85	75	85	100	90	50	98	30	90
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	20	0
Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0
Sandbur	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0
Sourgrass	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	0	-	-	-
Spanishneedles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Surinam grass	0	0	-	0	0	0	0	0	30	0	0	0	85	0	0	20	40	0	30	0	20
Tall Mallow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	40	0	0	30	0

Tabl D	COMPOUND		
Rate 500 g/ha	146	147	299
Postemergence			
Alexandergrass	65	75	100
Bermudagrass	35	40	100
C. purslane	20	10	0

C. ragw ed	40	0	100
Com. groundsel	0	0	100
Dallisgrass	80	85	100
Goosegrass	80	65	100
Green foxtail	-	-	100
Guineagrass	60	60	100
Itchgrass	65	65	100
Johnsongrass	65	70	100
Large crabgrass	65	60	100
P. morninglory	65	30	0
Purple nutsedge	35	60	100
Sandbur	80	90	100
Sourgrass	80	80	-
Spanishneedles	20	20	100
Surinam grass	80	70	100
Tall Mallow	50	20	100

Table D

	COMPOUND																					
Rate 500 g/ha	4	24	30	36	46	78	93	94	103	105	107	108	109	110	112	115	117	131	138	146	147	151
Preemergence																						
Alexandergrass	100	98	90	98	80	100	100	80	95	100	100	100	100	100	100	100	98	100	100	100	100	100
Bermudagrass	98	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	100	0	0	0
C. ragweed	0	0	0	10	0	0	80	10	0	0	100	80	55	0	0	20	65	100	100	75	0	20
Com. groundsel	-	0	100	100	0	0	100	100	0	80	100	100	0	20	10	98	100	100	100	100	0	100
Dallisgrass	98	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Goosegrass	100	100	98	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Green foxtail	-	-	100	100	100	100	100	100	100	100	100	100	100	100	0	100	100	100	100	100	-	100
Guineagrass	100	100	98	100	85	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Itchgrass	80	40	-	80	10	20	100	40	0	85	100	100	100	40	80	50	100	100	100	100	85	100
Johnsongrass	30	85	40	0	60	20	85	20	40	90	100	85	100	45	50	90	100	100	100	95	95	100
Large crabgrass	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
P. morninglory	0	0	0	0	0	0	20	0	0	0	100	0	100	0	10	10	40	100	65	20	30	20
Purple nutsedge	0	0	0	0	0	0	100	50	10	75	85	30	85	0	40	0	100	85	80	100	85	70
Sandbur	100	100	100	100	0	80	100	100	100	100	100	100	100	98	100	100	100	100	100	100	80	100
Sourgrass	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	-
Spanishneedles	0	0	0	10	20	0	45	0	20	0	100	20	30	0	10	10	0	90	75	100	30	40

Surinam grass	98	65	85	85	30	98	100	90	40	100	100	100	100	85	98	85	100	100	100	100	100	100
Tall Mallow	30	0	0	0	10	0	98	20	0	75	100	98	100	0	20	0	100	100	100	100	70	85

Table D	COMPOUND	
Rate 500 g/ha	170	242
Preemergence		
Alexandergrass	100	100
Bermudagrass	100	100
C. purslane	10	0
C. ragweed	45	100
Com. groundsel	100	-
Dallisgrass	100	100
Goosegrass	100	100
Green foxtail	100	100
Guineagrass	100	100
Itchgrass	50	100
Johnsongrass	95	100
Large crabgrass	100	100
P. morninglory	85	100
Purple nutsedge	65	60
Sandbur	98	100
Sourgrass	-	-
Spanishneedles	85	40
Surinam grass	100	100
Tall Mallow	45	85

Table D							COMPOUND								
Rate 250 g/ha	131	146	147	241	242	243	299	342	343	348	349	352	357	358	360
Postem rgence															
Alexandergrass	100	40	50	100	100	100	100	80	100	100	90	100	100	100	100
Bermudagrass	100	0	20	100	100	100	100	100	100	100	100	100	100	100	100
C. purslane	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	100	30	0	100	100	60	100	100	90	20	20	100	50	70	30
Com. groundsel	100	0	0	100	100	100	100	0	100	100	50	100	100	40	100
Dallisgrass	100	60	85	100	100	100	100	100	100	100	90	100	100	100	100
Goosegrass	100	30	50	100	100	100	100	100	100	100	90	100	100	100	100
Green foxtail	100	-	-	100	100	100	100	100	100	100	100	100	100	100	100
Guineagrass	100	35	50	100	100	100	100	90	100	80	40	100	100	100	100

Itchgrass	100	50	50	100	100	100	50	0	30	100	0	60	50	100	30
Johnsongrass	100	50	60	0	90	100	100	0	100	90	40	80	90	100	70
Large crabgrass	100	50	-	100	100	100	100	100	100	100	100	100	100	100	100
P. morninglory	100	50	30	0	0	40	0	0	0	0	0	0	0	0	10
Purple nutsedge	100	0	35	0	100	100	0	0	0	0	0	0	50	10	20
Sandbur	100	85	35	90	100	100	100	0	50	100	80	100	100	90	100
Sourgrass	-	80	80	-	-	-	-	-	-	-	-	-	-	-	-
Spanishneedles	60	10	0	10	100	100	20	0	20	0	0	30	20	0	20
Surinam grass	100	-	80	100	100	100	100	40	100	100	60	100	100	50	100
Tall Mallow	100	0	0	40	100	60	70	10	30	40	0	20	100	80	90

Table D

	COMPOUND																					
Rate 250 g/ha	4	24	28	30	34	46	78	93	103	105	107	108	109	110	112	115	119	131	138	146	147	151
Preemergence																						
Alexandergrass	90	65	75	80	60	75	75	100	85	98	100	100	100	100	80	85	100	100	98	100	90	100
Bermudagrass	98	100	100	98	100	100	100	100	100	100	100	100	100	100	98	100	100	100	100	90	100	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	100	0	0	0
C. ragweed	0	0	0	0	0	0	0	0	0	0	100	0	10	0	0	20	0	100	60	60	0	20
Com. groundsel	-	0	0	0	0	0	0	0	0	0	100	100	0	20	0	10	100	100	100	85	0	100
Dallisgrass	98	98	100	80	100	100	100	100	98	100	100	100	100	100	100	98	98	100	100	100	100	100
Goosegrass	98	98	100	85	98	98	98	100	98	100	100	100	100	100	100	100	100	100	100	100	100	100
Gre n foxtail	-	-	-	100	-	100	100	100	100	100	100	100	100	100	98	100	100	100	100	100	-	100
Guineagrass	100	98	98	98	98	65	100	100	90	100	100	100	100	100	90	98	98	100	100	100	100	100
Itchgrass	80	40	40	75	20	0	10	90	0	85	100	98	100	40	0	50	75	100	100	100	75	100
Johnsongrass	30	85	0	0	30	40	20	95	0	75	98	85	100	20	0	75	85	98	100	90	95	50
Large crabgrass	100	100	100	98	100	100	100	100	98	100	100	100	100	100	100	100	100	100	100	100	100	100
P. morninglory	0	0	0	0	0	0	0	0	0	0	75	0	85	0	0	0	0	85	65	0	0	0
Purple nutsedge	0	0	0	0	0	0	0	30	0	0	85	10	75	0	0	0	0	85	75	75	40	65
Sandbur	90	20	0	40	40	0	75	100	75	98	100	98	100	98	0	50	100	100	98	100	85	100
Sourgrass	100	100	100	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	-
Spanishn dles	0	0	75	0	40	10	0	0	20	0	100	0	30	0	0	10	10	75	30	100	10	0
Surinam grass	85	10	75	85	20	10	85	98	0	98	100	98	100	70	0	75	98	100	98	100	90	100
Tall Mallow	30	0	0	0	0	10	0	90	0	75	98	45	98	0	0	0	0	90	70	90	30	85

Table D

	COMPOUND	
Rate 250 g/ha	170	242
Preemergence		
Alexandergrass	98	100

Bermudagrass	100	100
C. purslane	0	0
C. ragweed	40	100
Com. groundsel	45	-
Dallisgrass	100	100
Goosegrass	98	100
Green foxtail	100	100
Guineagrass	100	100
Itchgrass	45	98
Johnsongrass	100	98
Large crabgrass	100	100
P. morninglory	65	20
Purple nutsedge	65	60
Sandbur	40	100
Sourgrass	-	-
Spanishneedles	40	10
Surinam grass	100	100
Tall Mallow	40	60

Table D							COMPOUND								
Rate 125 g/ha	131	146	147	241	242	243	299	342	343	348	349	352	357	358	360
Postemergence															
Alexandergrass	100	20	35	100	100	100	100	70	100	100	70	100	100	90	100
Bermudagrass	100	0	0	100	100	100	100	100	100	100	100	100	100	100	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	90	0	0	100	90	10	50	0	60	0	0	20	0	70	30
Com. groundsel	100	0	0	100	90	100	100	0	100	100	20	100	100	-	100
Dallisgrass	100	30	70	90	100	100	100	90	90	100	60	100	100	100	100
Goosegrass	100	35	50	100	100	100	100	100	90	100	100	100	100	100	100
Green foxtail	100	-	-	100	100	100	100	60	100	100	80	100	100	100	100
Guineagrass	100	10	30	100	100	100	80	50	50	100	0	80	70	100	100
Itchgrass	100	30	50	100	80	10	10	0	20	0	0	20	30	0	20
Johnsongrass	60	35	50	0	30	30	60	0	20	20	10	40	60	0	50
Large crabgrass	100	20	60	100	100	100	100	100	100	100	100	100	100	100	100
P. morninglory	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0
Purple nutsedge	30	0	0	0	0	10	0	0	0	0	0	0	0	0	10
Sandbur	100	-	0	100	100	30	100	-	50	60	20	100	0	100	100

Sourgrass	-	50	30	-	-	-	-	-	-	-	-	-	-	-	-
Spanishneedles	70	10	0	0	0	20	0	0	0	0	0	40	10	0	0
Surinam grass	100	-	20	100	100	100	100	30	70	80	10	70	100	50	90
Tall Mallow	90	0	0	10	90	40	90	0	0	20	0	30	50	70	60

Table D	COMPOUND																					
Rate 125 g/ha	4	18	24	28	30	34	46	78	93	94	103	105	107	108	109	113	114	115	117	119	131	138
Preemergence																						
Alexandergrass	80	30	10	60	50	30	65	75	85	50	40	98	100	98	100	98	98	75	90	98	100	80
Bermudagrass	30	100	98	100	98	100	100	98	100	90	80	100	100	100	100	100	100	100	100	100	100	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
C. ragweed	0	0	0	0	0	0	0	0	10	0	0	0	85	0	10	0	0	10	0	0	30	30
Com. groundsel	-	0	0	0	0	0	0	0	35	75	0	0	100	100	0	100	85	10	75	100	100	100
Dallisgrass	98	100	98	85	60	98	100	100	98	98	65	100	100	100	100	100	100	98	95	90	100	100
Goosegrass	98	85	98	98	85	85	85	98	100	85	85	98	100	100	100	100	100	98	100	100	100	100
Green foxtail	-	85	-	-	85	-	40	100	100	90	100	100	100	100	100	100	100	100	100	100	100	100
Guineagrass	90	65	90	75	75	85	30	85	100	0	85	98	100	98	100	100	100	85	100	98	100	100
Itchgrass	0	0	40	40	75	0	0	0	75	0	0	20	98	40	75	60	20	50	75	60	90	80
Johnsongrass	0	0	0	0	0	20	40	0	75	0	0	20	90	40	98	90	0	60	90	75	90	65
Large crabgrass	100	100	100	100	98	100	98	100	100	98	95	100	100	100	100	100	100	100	98	100	100	100
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	0	30	0	65	10	0	0	20	0	50	65
Purple nutsedge	0	0	0	0	0	0	0	0	0	50	0	0	65	10	40	30	20	0	0	0	60	65
Sandbur	30	0	20	0	40	30	0	0	65	20	0	0	98	98	100	100	85	40	0	98	100	65
Sourgrass	100	-	100	100	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spanishneedles	40	0	0	75	0	0	10	0	10	0	0	0	20	0	10	0	0	0	0	10	60	10
Surinam grass	90	20	10	65	40	0	0	30	90	80	0	40	100	98	98	100	75	75	100	85	100	85
Tall Mallow	0	0	0	0	0	0	10	0	30	0	0	45	90	10	85	30	10	0	65	0	80	40

Table D	COMPOUND				
Rate 125 g/ha	146	147	151	170	242
Preemergence					
Alexandergrass	98	85	98	85	98
Bermudagrass	90	98	100	100	98
C. purslane	0	0	0	0	0
C. ragw ed	0	0	0	0	100
Com. groundsel	75	0	100	45	-
Dallisgrass	100	98	100	85	98
Goosegrass	100	98	100	75	100

Green foxtail	100	-	100	100	100
Guineagrass	100	90	100	100	100
Itchgrass	90	65	85	30	80
Johnsongrass	80	85	50	75	85
Large crabgrass	100	100	100	100	100
P. morninglory	0	0	0	40	20
Purple nutsedge	70	30	30	0	40
Sandbur	100	0	100	40	90
Sourgrass	100	100	-	-	-
Spanishneedles	90	10	0	0	10
Surinam grass	100	85	100	75	90
Tall Mallow	80	0	75	30	0

Table D	COMPOUND															
Rate 64 g/ha	131	146	147	169	241	242	243	299	342	343	348	349	352	357	358	360
Postemergence																
Alexandergrass	100	10	20	65	10	90	20	90	0	50	70	40	80	100	100	50
Bermudagrass	100	0	0	100	100	100	100	90	90	60	100	70	100	100	100	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	0	0	0	0	20	30	10	100	0	0	0	0	20	0	-	30
Com. groundsel	100	0	0	65	0	90	0	100	-	100	50	-	50	100	0	0
Dallisgrass	100	-	10	90	50	90	70	100	0	90	90	0	80	100	100	100
Goosegrass	100	0	0	100	100	100	100	90	90	90	100	100	100	100	100	100
Green foxtail	100	-	-	100	10	100	100	100	0	100	100	10	100	100	100	100
Guineagrass	100	10	0	0	100	80	0	20	0	80	0	0	20	60	20	100
Itchgrass	20	30	0	0	0	40	0	0	0	20	0	0	0	0	0	0
Johnsongrass	30	20	0	0	0	40	0	0	0	20	0	0	0	0	0	0
Large crabgrass	100	20	10	100	100	100	100	100	40	90	100	70	100	100	100	100
P. morninglory	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sandbur	100	0	0	40	20	50	30	90	0	0	20	0	70	0	100	50
Sourgrass	-	50	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Spanishne dles	0	10	0	0	0	0	50	0	0	0	0	0	0	10	0	0
Surinam grass	60	-	-	65	60	100	90	50	20	20	20	0	30	80	0	100
Tall Mallow	40	0	0	0	0	50	30	30	0	0	0	0	30	20	50	40

Table D	COMPOUND																					
Rate 64 g/ha	4	18	24	28	30	34	46	78	93	103	105	107	108	109	112	113	115	117	119	130	131	132

Preemergence																						
Alexandergrass	80	0	10	0	40	20	40	30	30	0	85	100	85	98	0	98	50	90	75	98	98	98
Bermudagrass	0	85	95	100	98	98	98	90	90	60	98	100	100	100	85	100	98	98	100	100	100	100
C. purslane	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
C. ragweed	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	30	30	0
Com. groundsel	-	0	0	0	0	0	0	0	0	0	0	98	85	0	0	100	10	0	100	0	85	0
Dallisgrass	90	85	30	75	50	80	40	75	98	45	98	100	100	100	70	100	75	85	85	100	100	98
Goosegrass	95	85	50	85	70	75	75	85	98	65	98	100	98	100	85	100	90	85	98	100	100	98
Green foxtail	-	85	-	-	85	-	30	85	100	50	100	100	100	100	85	100	85	100	90	100	100	100
Guineagrass	50	30	75	65	40	80	30	65	100	0	98	100	98	100	40	100	30	100	85	100	100	85
Itchgrass	75	0	40	20	40	0	0	0	60	0	20	85	30	75	0	50	40	40	50	80	90	10
Johnsongrass	30	0	0	0	0	0	0	0	40	0	0	90	20	75	0	80	40	90	65	65	65	35
Large crabgrass	98	98	70	98	85	98	40	98	98	85	100	100	100	100	10	100	85	98	98	100	100	100
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	10	0	0	0	65	0	0
Purple nutsedge	0	0	0	0	0	0	0	0	20	0	0	20	0	40	0	20	0	0	0	0	40	0
Sandbur	65	0	20	0	0	0	0	0	65	0	0	65	30	98	0	75	0	0	65	100	85	0
Sourgrass	90	-	100	85	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spanishneedles	0	0	0	60	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	60	40	0
Surinam grass	65	0	10	0	40	0	0	20	85	0	0	100	65	85	0	98	65	80	50	80	85	30
Tall Mallow	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	0	40	0	85	80	40

Tabl D

	COMPOUND						
Rate 64 g/ha	138	139	146	147	151	170	242
Preemergence							
Alexandergrass	80	60	95	75	98	30	100
Bermudagrass	100	98	95	95	90	100	85
C. purslane	0	0	0	0	0	0	0
C. ragweed	10	0	0	0	0	0	100
Com. groundsel	40	0	0	0	0	0	-
Dallisgrass	100	90	98	80	100	85	98
Goosegrass	98	98	100	98	100	75	95
Green foxtail	100	98	100	-	100	100	100
Guineagrass	100	65	100	85	100	98	98
Itchgrass	30	20	90	20	75	0	70
Johnsongrass	40	10	60	20	40	0	40
Large crabgrass	100	90	100	98	100	100	100
P. morninglory	65	30	0	0	0	20	10

Purple nutsedge	30	0	65	0	0	0	0
Sandbur	65	40	100	0	90	40	0
Sourgrass	-	-	100	98	-	-	-
Spanishneedles	10	20	85	0	0	0	0
Surinam grass	40	20	60	75	85	30	85
Tall Mallow	40	20	50	0	0	30	0

Table D

	COMPOUND											
Rate 32 g/ha	131	241	242	243	342	343	348	349	352	357	358	360
Postemergence												
Alexandergrass	50	10	50	0	0	0	0	0	60	20	0	60
Bermudagrass	90	30	100	60	30	80	20	40	80	100	90	100
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	0	0	30	0	0	0	0	0	0	-	0	0
Com. groundsel	100	0	100	0	0	40	-	-	0	40	0	-
Dallisgrass	60	40	90	50	0	30	50	0	70	20	30	40
Goosegrass	100	100	100	80	30	80	90	20	90	100	20	100
Green foxtail	60	10	100	100	0	100	20	0	100	30	30	70
Guineagrass	20	0	100	0	0	0	0	0	0	0	0	100
Itchgrass	0	0	0	0	0	0	0	0	0	0	0	0
Johnsongrass	0	0	0	0	0	0	0	0	0	0	0	0
Large crabgrass	100	70	100	70	0	30	60	0	100	100	40	80
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	0
Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0
Sandbur	0	40	30	20	0	0	0	0	90	0	20	90
Sourgrass	-	-	-	-	-	-	-	-	-	-	-	-
Spanishn edles	0	0	0	50	0	0	0	0	0	10	0	-
Surinam grass	40	0	30	20	0	20	0	0	0	20	0	0
Tall Mallow	30	0	0	20	0	0	0	0	0	10	30	0

Table D

	COMPOUND																					
Rate 32 g/ha	4	18	24	28	30	34	46	78	93	103	105	107	108	109	112	113	115	119	131	146	147	151
Pr emergence																						
Alexandergrass	20	0	10	0	0	0	0	0	10	0	30	90	20	90	0	85	20	50	90	85	0	40
Bermudagrass	0	60	75	85	65	85	85	85	80	30	98	100	98	100	75	100	98	65	100	100	85	90
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Com. groundsel	-	0	0	0	0	0	0	0	0	0	0	75	75	0	0	65	0	98	75	0	0	0

Dallisgrass	85	0	30	30	0	0	40	0	98	20	98	85	50	98	65	95	75	65	95	90	60	85
Goosegrass	85	0	50	0	40	0	20	10	98	30	98	98	85	98	40	100	85	85	98	98	65	85
Green foxtail	-	0	-	-	50	-	0	75	75	0	85	100	100	100	0	98	70	75	100	-	-	100
Guineagrass	20	0	60	40	30	30	0	20	75	0	85	75	85	100	0	100	30	75	100	95	0	90
Itchgrass	0	0	40	0	20	0	0	0	60	0	0	75	20	65	0	40	40	10	50	90	0	0
Johnsongrass	0	0	0	0	0	0	0	0	0	0	0	85	20	0	0	60	40	0	40	60	0	0
Large crabgrass	100	0	70	85	40	85	20	40	98	0	98	98	100	100	10	100	75	90	100	100	98	98
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0
Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0
Sandbur	0	0	20	0	0	0	0	0	0	0	0	30	0	0	0	65	0	0	60	85	0	20
Sourgrass	65	-	40	60	-	98	-	-	-	-	-	-	-	-	-	-	-	-	-	98	75	-
Spanishn edles	-	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	75	0	0
Surinam grass	0	0	10	0	40	0	0	0	0	0	0	75	65	30	0	90	20	0	75	60	0	30
Tall Mallow	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	30	40	0	0

Table D	COMPOUND	
Rate 32 g/ha	170	242
Preemerg nce		
Alexandergrass	20	85
Bermudagrass	90	85
C. purslane	0	0
C. ragwe d	0	100
Com. groundsel	0	-
Dallisgrass	0	85
Goosegrass	65	85
Green foxtail	75	100
Guineagrass	85	85
Itchgrass	0	65
Johnsongrass	0	40
Large crabgrass	85	100
P. morninglory	20	0
Purple nutsedge	0	0
Sandbur	0	0
Sourgrass	-	-
Spanishneedles	0	0
Surinam grass	0	85
Tall Mallow	30	0

Table D

Rate 16 g/ha	COMPOUND 131	241	242	243	342	343	348	349	352	357	358	360
Postemergence												
Alexandergrass	0	0	0	0	0	0	0	0	0	0	0	20
Bermudagrass	30	0	90	20	20	0	0	0	0	90	0	0
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	0	0	50	0	-	0	0	0	-	0	0	0
Com. groundsel	90	-	0	0	-	0	30	-	-	-	0	-
Dallisgrass	20	0	60	0	0	0	0	0	0	0	0	0
Goosegrass	90	0	90	70	20	40	50	0	0	90	0	20
Green foxtail	0	0	30	10	0	0	0	0	0	10	0	0
Guineagrass	0	0	0	0	0	0	0	0	0	0	0	0
Itchgrass	0	0	0	0	0	0	0	0	0	0	0	0
Johnsongrass	0	80	0	0	0	0	0	0	0	0	0	0
Large crabgrass	90	0	0	0	0	0	20	0	0	100	0	0
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	0
Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0
Sandbur	0	0	20	10	0	0	0	0	0	0	0	0
Sourgrass	-	-	-	-	-	-	-	-	-	-	-	-
Spanishn edles	0	0	0	0	0	0	0	0	0	10	0	0
Surinam grass	0	0	0	0	0	0	0	0	0	0	0	0
Tall Mallow	0	0	0	50	0	0	0	0	0	10	0	0

Table D

Rate 16 g/ha	COMPOUND 4	18	30	46	78	93	103	105	107	108	109	112	113	115	119	131	146	147	151	170	242
Preem rgence																					
Alexandergrass	20	0	0	0	0	0	0	0	0	20	40	0	65	0	0	20	65	0	40	20	65
Bermudagrass	0	40	50	65	75	80	30	85	85	85	98	60	98	75	50	100	65	0	90	80	80
C. purslane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. ragweed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Com. groundsel	-	0	0	0	0	0	0	0	40	65	0	0	0	0	85	75	65	0	0	0	-
Dallisgrass	75	0	0	20	0	60	10	60	30	40	40	30	0	0	30	85	80	0	100	0	65
Goosegrass	70	0	30	0	10	65	0	85	85	60	85	40	90	20	30	75	90	0	85	50	75
Green foxtail	-	0	0	0	0	65	0	75	100	40	98	0	80	0	10	90	-	-	100	65	80
Guineagrass	20	0	30	0	20	65	0	40	65	0	90	0	85	0	65	0	90	0	85	0	70
Itchgrass	0	0	20	0	0	50	0	0	40	0	0	0	10	40	0	30	85	0	0	0	65
Johnsongrass	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	10	60	0	0	0	10

Large crabgrass	100	0	40	0	0	90	0	40	85	85	85	10	85	75	85	100	90	50	98	30	90
P. morninglory	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	20	0
Purple nutsedge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0
Sandbur	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0
Sourgrass	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	0	-	-	-
Spanishneedles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Surinam grass	0	0	-	0	0	0	0	0	30	0	0	0	85	0	0	20	40	0	30	0	20
Tall Mallow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	40	0	0	30	0

<u>TEST E</u>

Compounds evaluated in this test were formulated in a non-phytotoxic solvent mixture which included a surfactant and applied to plants that were in the 1- to 4-leaf stage (postemergence application). A mixture of sandy loam soil and greenhouse potting mix in a 60:40 ratio was used for the postemergence test.

Plantings of these crops and weed species were adjusted to produce plants of appropriate size for the postemergence test. All plant species were grown using normal greenhouse practices. Crop and weed species include annual bluegrass (*Poa annua*), blackgrass (*Alopecurus myosuroides*), black nightshade (*Solanum nigra*), chickweed (*Stellaria media*), common poppy (*Papaver rhoeas*), deadnettle (*Lamium amplexicaule*), downy brome (*Bromus tectorum*), field violet (*Viola arvensis*), galium (*Galium aparine*), green foxtail (*Setaria viridis*), Italian ryegrass (*Lolium multiflorum*), jointed goatgrass (*Aegilops cylindrica*), kochia (*Kochia scoparia*), lambsquarters (*Chenopodium album*), littleseed canarygrass (*Phalaris minor*), rape (*Brassica napus*), redroot pigweed (*Amaranthus retroflexus*), Russian thistle (*Salsola kali*), scentless chamomile (*Matricaria inodora*), spring barley (*Hordeum vulgare*), sugar beet (*Beta vulgaris*), sunflower (*Helianthus annuus*), ivyleaf speedwell (*Veronica hederaefolia*), spring wheat (*Triticum aestivum*), winter wheat (*Triticum aestivum*), wild buckwheat (*Polygonum convolvulus*), wild mustard (*Sinapis arvensis*), wild oat (*Avena fatua*), windgrass (*Apera spica-venti*) and winter barley (*Hordeum vulgare*).

Treated plants and untreated controls were maintained in a greenhouse for approximately 21 to 28 days, after which all treated plants were compared to untreated controls and visually evaluated. Plant response ratings, summarized in Table E, are based upon a 0 to 100 scale where 0 is no effect and 100 is complete control. A dash response (-) means no test result.

Table E	COMPOUND
Rate 2000 g/ha	177
Postemergence	
Annual bluegras	-
Barley (winter)	-
Blackgrass	-
Blk nightshade	-
Chickweed	-
Common poppy	-
Deadnettl	-
Downy brome	-
Field violet	-
Galium	-
Green foxtail	-
I. Ryegrass	-
Jointed goatgra	-
Kochia	-
Lambsquarters	-
LS canarygrass	-
Rape	-
Redroot pigweed	-
Russian thistle	-
Scentless chamo	-
Spring Barley	-
Spring Wheat	-
Sugar beet	-
Sunflower	-
Veronica hedera	-
Wheat (winter)	70
Wild buckwheat	-
Wild mustard	-
Wild oat	-
Windgrass	-

Table E	COMPOUND
Rate 2000 g/ha	177
Preemergence	
Annual bluegras	-
Barley (winter)	80
Blackgrass	60
Blk nightshade	-
Chickweed	-
Common poppy	-
Deadnettle	-
Downy brome	-
Field violet	-
Galium	-
Green foxtail	100
I. Ryegrass	65
Jointed goatgra	-
Kochia	-
Lambsquarters	-
LS canarygrass	-
Rape	-
Redroot pigweed	-
Russian thistle	-
Scentless chamo	-
Spring Barley	-
Spring Wheat	-
Sugar beet	-
Sunflower	-
Wheat (winter)	70
Wild buckwheat	-
Wild mustard	-
Wild oat	70
Windgrass	-

Table E	COMPOUND																				
Rate 1000 g/ha	4	30	40	46	67	75	86	88	94	103	115	123	157	161	162	163	165	167	169	172	173	174
Postemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Barley (winter)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I. Ryegrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wh at	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	0	0	0	70	40	70	60	10	0	10	40	65	40	50	50	70	85	50	65	50	60	50
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E	COMPOUND																					
Rate 1000 g/ha	176	177	202	204	207	208	212	232	233	236	238	246	269	271	273	274	277	281	282	283	284	285
Postemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I. Ryegrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	40	65	60	30	50	60	75	60	60	10	40	0	55	0	60	60	10	80	50	75	85	30
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E				COMPOUND					
Rate 1000 g/ha	288	290	291	297	309	328	340	341	369
Postemergence									
Annual bluegras	-	-	-	-	-	-	-	-	-
Barley (winter)	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-

Downy brome	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-
I. Ryegrass	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-
Wheat (winter)	40	70	55	70	80	80	60	65	70
Wild buckwheat	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-
Wild oat	-	-	-	-	-	-	-	-	-
Windgrass	-	-	-	-	-	-	-	-	-

Table E	COMPOUND																					
Rate 1000 g/ha	4	18	30	40	46	67	75	86	88	94	103	115	123	157	161	162	163	165	167	169	172	173
Preemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	10	50	10	50	50	40	60	70	0	50	50	30	50	30	40	40	50	50	20	50	20	40
Blackgrass	100	85	30	70	70	40	85	65	50	60	70	60	65	50	55	55	50	100	80	55	80	98
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Green foxtail	100	70	60	90	80	60	60	100	85	100	100	90	40	50	90	85	100	65	100	95	100	100
I. Ryegrass	85	70	50	70	70	50	50	60	50	60	70	80	50	50	85	70	60	70	80	90	80	98
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	0	20	0	40	50	20	65	65	10	40	30	20	20	40	45	40	55	70	30	65	30	50
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	50	50	20	60	70	50	10	70	20	50	70	60	55	50	60	60	70	70	50	40	50	50
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E	COMPOUND																					
Rate 1000 g/ha	174	176	177	202	204	207	208	212	232	233	236	238	246	269	271	273	274	277	281	282	283	284
Preemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	10	50	70	70	30	80	50	50	55	60	50	30	60	60	60	80	55	50	80	70	80	60
Blackgrass	55	75	60	30	95	85	85	65	50	85	70	75	100	40	100	100	65	100	50	70	85	70
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fi ld violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	85	100	85	100	100	100	70	100	100	100	100	100	100	100	100	60	40	100	100	100	100	100
I. Ryegrass	40	98	60	60	65	30	95	70	55	60	55	85	100	70	100	60	50	100	60	70	98	85
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	40	50	50	70	50	70	30	60	50	60	20	50	50	50	75	60	50	50	80	70	80	80
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	50	50	80	80	50	70	50	70	60	60	50	50	85	70	60	80	60	70	80	80	70	70
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Tabl E	COMPOUND									
Rate 1000 g/ha	285	288	290	291	297	309	328	340	341	369
Preemergence										
Annual bluegras	-	-	-	-	-	-	-	-	-	-
Barley (winter)	20	10	70	20	60	70	70	50	80	60
Blackgrass	70	-	95	50	50	75	40	85	90	100
Blk nightshade	-	-	-	-	-	-	-	-	-	-
Chickwe d	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-
Green foxtail	65	100	85	100	60	100	100	100	85	100
I. Ryegrass	70	60	90	90	40	70	70	65	55	70
Jointed goatgra	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-

	4	18	30	38	40	46	67	75	86	94
Russian thistle	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	50	55	50	60	70	70	70	60	85	70
Wild buckwheat	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-
Wild oat	40	50	70	60	70	70	60	60	80	75
Windgrass	-	-	-	-	-	-	-	-	-	-

Table E

	COMPOUND																					
Rate 500 g/ha	4	18	30	38	40	46	67	75	86	94	98	103	105	109	114	115	116	118	131	132	146	147
Postemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	50	60	-	75	-	70	-	65	-
Barley (winter)	-	-	-	-	-	-	-	-	-	-	-	-	-	10	20	-	10	-	20	-	20	-
Blackgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	70	65	-	80	-	75	-	40	-
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	60	80	-	60	-	70	-	70	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	-	50	-	50	-	30	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	10	20	-	10	-	0	-	10	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	30	70	-	50	-	50	-	20	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	0	30	-	60	-	70	-	5	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	40	15	-	0	-	0	-	10	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	50	85	-	70	-	50	-	60	-
Green foxtail	-	-	-	-	-	-	-	-	-	-	-	-	-	80	90	-	75	-	75	-	80	-
I. Ryegrass	-	-	-	-	-	-	-	-	-	-	-	-	-	65	20	-	0	-	40	-	50	-
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	30	50	-	50	-	60	-	40	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	50	30	-	0	-	0	-	40	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	30	40	-	0	-	0	-	50	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	65	60	-	50	-	50	-	65	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	60	55	-	30	-	0	-	60	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	15	20	-	0	-	0	-	50	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-	0	-	0	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	10	0	-	40	-	50	-	10	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	20	35	-	0	-	20	-	20	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	10	30	-	10	-	40	-	20	-

Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	30	50	-	0	-	0	-	40	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	40	15	-	0	-	0	-	50	-
Veronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	70	70	-	70	-	20	-	70	-
Wheat (winter)	0	65	0	10	0	70	30	75	70	0	55	0	20	0	20	20	10	70	20	80	20	80
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	10	30	-	0	-	0	-	50	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	20	70	-	40	-	30	-	60	-
Wild oat	-	-	-	-	-	-	-	-	-	-	-	-	-	10	0	-	70	-	70	-	10	-
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	95	90	-	80	-	100	-	100	-

Table E	COMPOUND																					
Rate 500 g/ha	157	158	161	162	163	165	167	169	172	173	174	176	177	191	192	202	207	208	211	212	218	219
Postemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I. Ryegrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Wheat (winter)	30	30	35	40	50	65	40	50	40	40	40	50	70	60	50	55	30	50	40	70	85	60
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E

	COMPOUND																					
Rate 500 g/ha	232	233	236	241	242	243	246	267	269	271	273	274	276	277	281	282	283	284	285	288	290	291
Postemergence																						
Annual bluegras	-	-	-	-	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I. Ryegrass	-	-	-	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wh at	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	50	55	0	50	90	80	0	70	40	0	50	50	20	0	70	30	50	20	40	30	60	40
Wild buckwheat	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Wild oat	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windgrass	-	-	-	-	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E

	COMPOUND																	
Rate 500 g/ha	293	297	309	315	317	328	340	341	350	351	353	354	369	370	371	372	375	388
Postemergence																		
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I. Ryegrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V ronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	50	60	70	80	95	70	55	65	40	75	40	50	70	85	80	80	50	65
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E

COMPOUND

Rate 500 g/ha	4	18	30	38	40	46	67	75	86	94	98	103	105	109	114	115	116	118	131	132	146	147
Preemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	75	60	-	100	-	100	-	90	-
Barley (winter)	10	30	10	0	40	40	40	20	80	50	30	40	10	5	40	20	80	50	100	60	95	45
Blackgrass	90	25	-	35	60	55	20	40	55	60	55	50	50	90	100	50	100	100	100	75	70	65
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	90	90	-	100	-	90	-	100	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	-	100	-	100	-	70	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	30	20	-	80	-	100	-	50	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	60	50	-	70	-	100	-	60	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	20	10	-	90	-	40	-	50	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	100	70	-	100	-	100	-	95	-
Green foxtail	100	50	60	100	90	85	55	60	55	90	65	70	100	85	85	70	-	65	-	100	100	65
I. Ryegrass	50	60	40	80	70	65	30	30	50	60	60	50	85	70	95	50	100	60	100	100	90	50
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	70	50	-	65	-	95	-	50	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	100	30	-	70	-	100	-	75	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	-	100	-	100	-	100	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	50	80	-	100	-	100	-	85	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	65	50	-	100	-	90	-	60	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	-	100	-	95	-	100	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	50	-	0	-	10	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	30	10	-	-	-	-	-	80	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	50	20	-	100	-	85	-	90	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	50	20	-	100	-	100	-	100	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	70	50	-	95	-	90	-	80	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	-	70	-	20	-	30	-
Wheat (winter)	0	10	0	10	30	70	10	20	40	30	40	30	10	10	0	10	100	70	95	60	100	70
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	90	80	-	95	-	100	-	100	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	80	90	-	65	-	100	-	100	-
Wild oat	25	40	10	20	50	60	40	-	60	40	50	50	55	80	70	50	80	70	100	65	85	0
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	-	100	-	100	-	100	-

Table E

COMPOUND

Rate 500 g/ha	157	158	161	162	163	165	167	169	172	173	174	176	177	191	192	201	202	207	208	211	212	218
Preemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	10	30	40	30	40	55	40	30	40	40	0	40	60	20	30	20	40	70	40	10	40	65

Blackgrass	40	50	50	60	40	60	60	60	60	70	50	50	60	30	50	50	50	80	85	50	50	100
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	40	50	70	65	100	55	85	70	85	-	50	70	60	50	65	65	85	90	60	20	65	85
I. Ryegrass	30	50	65	65	50	55	65	80	65	45	20	60	60	30	60	60	60	55	60	10	70	70
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	30	-	20	15	-	50	20	40	20	30	50	30	70	50	40	40	40	70	30	30	30	50
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	30	60	50	50	60	60	40	30	40	45	40	50	80	50	55	40	60	70	60	40	70	70
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Table E									COMPOUND													
Rate 500 g/ha	219	232	233	236	241	242	243	246	267	269	271	273	274	276	277	281	282	283	284	285	288	290
Preemergence																						
Annual bluegras	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	70	20	50	40	60	85	70	50	70	50	50	65	60	50	65	70	50	75	30	10	5	60
Blackgrass	70	50	60	60	98	98	100	100	60	30	80	80	30	50	70	-	60	60	-	55	50	70
Blk nightshade	-	-	-	-	-	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Deadnettle	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	70	90	100	100	90	100	100	100	100	70	100	30	30	98	100	100	100	100	100	60	60	70
I. Ryegrass	70	50	50	40	100	100	100	90	50	60	85	55	30	50	95	60	70	90	70	70	50	70
Jointed goatgra	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	60	30	50	10	60	95	75	-	70	40	50	60	50	50	10	65	60	65	70	25	30	30
Wild buckwheat	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	60	50	60	30	55	100	90	65	70	70	65	70	50	60	65	65	70	50	60	20	30	70
Windgrass	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E

	COMPOUND																		
Rate 500 g/ha	291	293	297	309	315	317	328	340	341	350	351	353	354	369	370	371	372	375	388
Preemergence																			
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	30	50	55	20	80	70	50	40	60	25	80	30	40	50	70	70	70	30	70
Blackgrass	40	50	20	60	85	60	50	60	60	60	100	55	30	70	100	100	100	65	40
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Green foxtail	85	60	60	100	100	100	85	60	55	85	85	100	100	85	100	85	100	70	85
I. Ryegrass	100	50	50	60	85	95	60	60	55	85	60	90	90	65	90	90	85	65	60
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	50	55	60	65	85	60	70	50	50	50	70	60	60	55	60	65	70	50	60
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	50	50	60	50	70	70	50	50	70	65	80	85	40	70	90	90	80	70	30
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E

	COMPOUND																					
Rate 250 g/ha	4	18	30	38	40	46	67	75	86	88	93	94	98	103	105	107	108	109	110	111	112	113
Postemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	50	50	10	-	-	-	-
Barley (winter)	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	10	15	20	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	85	10	10	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	60	50	40	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	5	0	10	-	-	-	-
Deadnettl	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	50	30	30	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	0	20	20	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	30	50	30	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	85	75	65	-	-	-	-
I. Ryegrass	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	30	40	10	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	10	10	5	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	15	30	30	-	-	-	-

Lambsquarters	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	5	20	30	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	60	70	50	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	50	50	50	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	20	30	15	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	0	0	0	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	10	10	0	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	30	25	20	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	10	20	20	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	40	20	35	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	30	35	30	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	10	40	50	-	-	-	-
Wheat (winter)	0	55	0	10	0	60	20	60	55	0	0	0	50	0	10	0	40	75	0	0	10	70
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	10	10	20	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	40	80	50	-	-	-	-
Wild oat	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	0	20	0	-	-	-	-
Windgrass	-	-	-	-	-	-	-	-	-	-	80	-	-	-	-	90	100	90	-	-	-	-

Table E

	COMPOUND																					
Rate 250 g/ha	114	115	116	117	118	119	123	131	132	137	138	146	147	148	157	158	161	162	163	165	167	169
Postemergence																						
Annual bluegras	30	-	70	-	-	-	-	40	-	-	10	10	-	-	-	-	-	-	-	-	-	-
Barley (winter)	10	-	10	-	-	-	-	0	-	-	0	10	-	-	-	-	-	-	-	-	-	-
Blackgrass	20	-	80	-	-	-	-	60	-	-	0	15	-	-	-	-	-	-	-	-	-	-
Blk nightshade	40	-	50	-	-	-	-	60	-	-	60	40	-	-	-	-	-	-	-	-	-	-
Chickweed	0	-	20	-	-	-	-	20	-	-	0	0	-	-	-	-	-	-	-	-	-	-
Common poppy	10	-	0	-	-	-	-	0	-	-	40	0	-	-	-	-	-	-	-	-	-	-
Deadnettle	10	-	20	-	-	-	-	30	-	-	50	-	-	-	-	-	-	-	-	-	-	-
Downy brome	0	-	30	-	-	-	-	50	-	-	2	0	-	-	-	-	-	-	-	-	-	-
Field viol t	0	-	0	-	-	-	-	0	-	-	30	0	-	-	-	-	-	-	-	-	-	-
Galium	50	-	40	-	-	-	-	0	-	-	50	15	-	-	-	-	-	-	-	-	-	-
Green foxtail	50	-	75	-	-	-	-	50	-	-	70	70	-	-	-	-	-	-	-	-	-	-
I. Ryegrass	20	-	70	-	-	-	-	30	-	-	0	10	-	-	-	-	-	-	-	-	-	-
Jointed goatgra	5	-	40	-	-	-	-	0	-	-	0	10	-	-	-	-	-	-	-	-	-	-
Kochia	30	-	0	-	-	-	-	0	-	-	0	10	-	-	-	-	-	-	-	-	-	-
Lambsquarters	30	-	0	-	-	-	-	0	-	-	30	10	-	-	-	-	-	-	-	-	-	-
LS canarygrass	30	-	40	-	-	-	-	20	-	-	10	30	-	-	-	-	-	-	-	-	-	-
Rape	50	-	0	-	-	-	-	0	-	-	0	50	-	-	-	-	-	-	-	-	-	-

Redroot pigweed	10	-	0	-	-	-	-	0	-	-	10	10	-	-	-	-	-	-	-	-	-	-
Russian thistle	0	-	0	-	-	-	-	0	-	-	0	0	-	-	-	-	-	-	-	-	-	-
Scentless chamo	0	-	0	-	-	-	-	20	-	-	0	10	-	-	-	-	-	-	-	-	-	-
Spring Barley	30	-	10	-	-	-	-	0	-	-	5	10	-	-	-	-	-	-	-	-	-	-
Spring Wheat	20	-	10	-	-	-	-	0	-	-	0	10	-	-	-	-	-	-	-	-	-	-
Sugar be t	55	-	0	-	-	-	-	0	-	-	10	30	-	-	-	-	-	-	-	-	-	-
Sunflower	10	-	0	-	-	-	-	0	-	-	0	40	-	-	-	-	-	-	-	-	-	-
Veronica hedera	50	-	0	-	-	-	-	0	-	-	-	40	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	60	10	45	25	65	20	55	0	50	20	80	60	80	80	20	40	30	30	40	40	30	40
Wild buckwheat	30	-	0	-	-	-	-	0	-	-	0	10	-	-	-	-	-	-	-	-	-	-
Wild mustard	50	-	40	-	-	-	-	0	-	-	0	40	-	-	-	-	-	-	-	-	-	-
Wild oat	0	-	30	-	-	-	-	20	-	-	0	0	-	-	-	-	-	-	-	-	-	-
Windgrass	85	-	75	-	-	-	-	90	-	-	95	95	-	-	-	-	-	-	-	-	-	-

Tabl E

	COMPOUND																					
Rate 250 g/ha	170	172	173	174	176	191	199	201	202	204	207	208	211	212	218	219	225	232	233	236	238	241
Postemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I. Ryegrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V ronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	80	30	50	30	30	50	70	40	50	50	50	40	50	65	70	50	70	40	50	0	60	60
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Table E								COMPOUND														
Rate 250 g/ha	242	243	246	267	269	271	273	274	276	277	281	282	283	284	285	287	288	290	291	293	295	297
Postemergence																						
Annual bluegras	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blk nightshade	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D adnettle	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I. Ryegrass	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jointed goatgra	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sunflower	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	10	75	0	70	50	10	30	30	10	0	55	20	60	60	20	50	35	50	30	30	50	50
Wild buckwheat	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windgrass	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E									COMPOUND												
Rate 250 g/ha	299	309	310	314	315	317	328	340	341	350	351	353	354	367	369	370	371	372	375	387	388
Postemergence																					
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickwe d	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I. Ryegrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	70	50	80	70	80	95	65	30	70	30	70	30	40	40	60	80	65	70	35	30	30

Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wild oat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Table E									COMPOUND													
Rate 250 g/ha	4	18	30	38	40	46	67	75	86	88	93	94	98	103	105	107	108	109	110	111	112	113
Preemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	65	-	-	-	-	85	60	90	-	-	-	-
Barley (winter)	10	20	10	0	30	30	20	10	70	0	50	40	10	30	0	15	10	20	5	0	10	85
Blackgrass	50	10	30	45	40	40	10	20	60	50	75	60	20	30	50	80	90	65	60	0	50	85
Blk nightshade	-	-	-	-	-	-	-	-	-	-	80	-	-	-	-	95	90	90	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	85	50	30	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	85	-	-	-	-	85	40	30	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	75	70	80	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	20	20	15	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	100	95	100	-	-	-	-
Green foxtail	55	30	30	90	70	60	30	60	40	60	-	80	60	70	90	95	90	100	85	10	50	85
I. Ryegrass	20	40	20	20	30	50	40	20	30	10	100	40	50	50	30	95	95	100	20	0	20	100
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	60	-	-	-	-	50	60	65	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	80	40	50	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	100	90	100	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	60	-	-	-	-	80	70	60	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	100	50	55	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	90	-	-	-	-	100	90	100	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	10	15	0	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	80	30	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	60	-	-	-	-	70	5	20	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	80	-	-	-	-	85	30	40	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	100	60	60	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	40	10	10	-	-	-	-
Wheat (winter)	0	0	0	0	20	40	10	10	60	0	100	30	40	20	0	40	10	55	0	0	0	60
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	95	80	85	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	80	-	-	-	-	100	65	85	-	-	-	-
Wild oat	20	20	10	20	40	55	30	0	70	10	60	40	40	40	50	80	75	50	10	0	0	60
Windgrass	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	100	100	100	-	-	-	-

Table E

Rate 250 g/ha	COMPOUND 114	115	116	117	118	119	123	131	132	137	138	146	147	148	157	158	161	162	163	165	167	169
Preemergence																						
Annual bluegras	50	-	85	-	-	-	-	80	-	-	70	80	-	-	-	-	-	-	-	-	-	-
Barley (winter)	10	10	70	30	65	10	30	100	50	20	90	10	20	10	0	30	30	30	30	20	40	30
Blackgrass	50	30	45	60	80	50	30	60	60	30	70	90	55	50	20	50	30	55	30	40	50	30
Blk nightshade	60	-	90	-	-	-	-	85	-	-	95	10	-	-	-	-	-	-	-	-	-	-
Chickweed	50	-	100	-	-	-	-	100	-	-	-	80	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-
Deadnettle	20	-	80	-	-	-	-	60	-	-	70	40	-	-	-	-	-	-	-	-	-	-
Downy brome	60	-	50	-	-	-	-	80	-	-	90	0	-	-	-	-	-	-	-	-	-	-
Field violet	0	-	40	-	-	-	-	20	-	-	70	30	-	-	-	-	-	-	-	-	-	-
Galium	60	-	100	-	-	-	-	50	-	-	70	50	-	-	-	-	-	-	-	-	-	-
Green foxtail	100	65	100	80	55	60	20	100	98	50	75	65	65	55	30	20	60	60	100	50	60	60
I. Ryegrass	100	45	60	85	60	60	40	100	100	50	80	60	55	30	20	50	60	50	30	60	30	75
Jointed goatgra	65	-	100	-	-	-	-	70	-	-	80	50	-	-	-	-	-	-	-	-	-	-
Kochia	30	-	85	-	-	-	-	10	-	-	40	50	-	-	-	-	-	-	-	-	-	-
Lambsquarters	100	-	100	-	-	-	-	100	-	-	100	100	-	-	-	-	-	-	-	-	-	-
LS canarygrass	60	-	80	-	-	-	-	70	-	-	85	75	-	-	-	-	-	-	-	-	-	-
Rape	20	-	100	-	-	-	-	75	-	-	95	80	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	65	-	100	-	-	-	-	100	-	-	90	100	-	-	-	-	-	-	-	-	-	-
Russian thistle	0	-	0	-	-	-	-	0	-	-	20	0	-	-	-	-	-	-	-	-	-	-
Scentless chamo	30	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-
Spring Barley	0	-	75	-	-	-	-	70	-	-	90	10	-	-	-	-	-	-	-	-	-	-
Spring Wheat	10	-	80	-	-	-	-	100	-	-	100	80	-	-	-	-	-	-	-	-	-	-
Sugar beet	40	-	85	-	-	-	-	60	-	-	50	60	-	-	-	-	-	-	-	-	-	-
Sunflower	0	-	40	-	-	-	-	20	-	-	60	30	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	0	5	30	90	50	30	10	60	40	30	80	0	30	0	20	30	10	30	30	40	10	10
Wild buckwheat	50	-	60	-	-	-	-	70	-	-	100	85	-	-	-	-	-	-	-	-	-	-
Wild mustard	40	-	85	-	-	-	-	100	-	-	55	95	-	-	-	-	-	-	-	-	-	-
Wild oat	70	40	95	60	70	30	50	60	50	10	65	50	0	40	50	50	50	50	50	55	30	50
Windgrass	100	-	100	-	-	-	-	100	-	-	100	100	-	-	-	-	-	-	-	-	-	-

Table E

Rate 250 g/ha	COMPOUND 170	172	173	174	176	191	199	201	202	204	207	208	211	212	218	219	225	232	233	236	238	241
Preemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Barley (winter)	70	40	30	0	30	30	70	0	20	50	65	30	20	20	50	30	60	20	30	20	40	50
Blackgrass	85	50	50	30	40	20	60	30	30	55	30	40	0	20	70	20	80	30	50	60	50	100
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	100	60	85	30	50	40	100	50	70	75	80	40	10	55	55	60	60	95	100	85	70	90
I. Ryegrass	70	30	35	0	50	0	70	50	30	50	40	50	0	60	60	55	90	40	40	20	50	70
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	70	10	20	60	20	30	50	40	50	30	60	30	35	10	40	60	70	30	50	0	40	50
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	70	30	50	50	30	40	80	50	50	50	65	50	-	60	65	50	60	55	55	20	50	60
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Table E									COMPOUND													
Rat 250 g/ha	242	243	246	267	269	271	273	274	276	277	281	282	283	284	285	287	288	290	291	293	295	297
Preemergence																						
Annual bluegras	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	60	60	40	30	30	45	70	50	30	50	70	50	60	50	5	35	0	55	10	40	30	50
Blackgrass	100	85	60	50	40	100	55	0	50	100	50	60	50	65	10	60	50	60	30	-	10	40
Blk nightshade	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadn ttle	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	98	100	100	100	60	100	20	20	100	100	100	80	100	100	55	90	50	65	55	70	100	60
I. Ryegrass	98	85	80	50	50	100	30	20	60	75	60	70	70	85	40	60	30	60	70	50	50	60
Jointed goatgra	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	55	70	50	55	60	60	50	30	30	20	60	60	50	70	40	50	40	10	35	50	60	30
Wild buckwheat	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	98	55	50	55	70	60	80	40	60	60	70	70	65	70	10	60	20	60	20	10	10	70
Windgrass	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E

	COMPOUND																				
Rate 250 g/ha	299	309	310	314	315	317	328	340	341	350	351	353	354	367	369	370	371	372	375	387	388
Preemergence																					
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	50	50	70	60	70	50	40	50	70	10	70	20	30	30	70	60	60	70	-	15	20
Blackgrass	100	60	85	50	60	100	50	50	40	30	85	50	55	30	85	70	100	60	60	20	0
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	100	65	100	85	100	100	100	30	25	55	90	100	80	50	50	100	60	60	60	20	40
I. Ryegrass	85	50	70	55	70	85	65	55	50	90	60	90	60	60	50	85	70	70	70	10	40
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	65	70	70	70	70	50	40	40	40	40	60	40	50	40	60	40	60	50	40	55	50
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	70	50	70	70	60	60	70	50	60	60	70	55	30	50	65	75	85	60	60	0	20
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Tabl E

	COMPOUND																					
Rate 125 g/ha	4	38	93	98	105	107	108	109	110	111	112	113	114	116	117	119	131	132	137	138	146	147
Postemergence																						
Annual bluegras	-	-	20	-	-	5	15	10	-	-	-	-	0	50	-	-	40	-	-	0	10	-
Barley (winter)	-	-	0	-	-	5	10	40	-	-	-	-	5	10	-	-	0	-	-	0	10	-
Blackgrass	-	-	30	-	-	80	5	30	-	-	-	-	0	40	-	-	20	-	-	20	25	-
Blk nightshade	-	-	0	-	-	30	30	40	-	-	-	-	50	50	-	-	50	-	-	20	50	-
Chickweed	-	-	0	-	-	0	0	0	-	-	-	-	10	0	-	-	10	-	-	0	0	-
Common poppy	-	-	0	-	-	0	0	30	-	-	-	-	0	0	-	-	0	-	-	20	10	-
Deadnettle	-	-	0	-	-	5	20	0	-	-	-	-	20	0	-	-	30	-	-	0	10	-
Downy brome	-	-	0	-	-	10	0	0	-	-	-	-	0	0	-	-	0	-	-	0	10	-
Field violet	-	-	0	-	-	25	0	10	-	-	-	-	0	0	-	-	0	-	-	10	0	-
Galium	-	-	0	-	-	30	10	50	-	-	-	-	10	40	-	-	10	-	-	20	0	-
Green foxtail	-	-	0	-	-	30	15	30	-	-	-	-	20	70	-	-	70	-	-	15	20	-
I. Ryegrass	-	-	0	-	-	50	5	10	-	-	-	-	10	50	-	-	0	-	-	0	10	-
Joint d goatgra	-	-	0	-	-	10	10	10	-	-	-	-	15	20	-	-	0	-	-	0	15	-

Kochia	-	-	0	-	-	20	40	30	-	-	-	-	20	0	-	-	0	-	-	15	10	-
Lambsquarters	-	-	0	-	-	15	20	20	-	-	-	-	30	30	-	-	0	-	-	10	20	-
LS canarygrass	-	-	0	-	-	20	20	25	-	-	-	-	0	30	-	-	0	-	-	10	30	-
Rape	-	-	0	-	-	30	40	50	-	-	-	-	55	0	-	-	0	-	-	10	40	-
Redroot pigweed	-	-	0	-	-	10	20	20	-	-	-	-	15	0	-	-	0	-	-	20	20	-
Russian thistle	-	-	0	-	-	0	0	0	-	-	-	-	0	0	-	-	0	-	-	0	0	-
Scentless chamo	-	-	0	-	-	0	0	0	-	-	-	-	0	0	-	-	0	-	-	20	10	-
Spring Barley	-	-	0	-	-	0	20	30	-	-	-	-	20	0	-	-	0	-	-	0	10	-
Spring Wheat	-	-	0	-	-	5	10	30	-	-	-	-	10	0	-	-	0	-	-	0	10	-
Sugar beet	-	-	0	-	-	10	10	30	-	-	-	-	50	0	-	-	0	-	-	30	20	-
Sunflower	-	-	0	-	-	20	30	30	-	-	-	-	10	0	-	-	0	-	-	0	40	-
Veronica hedera	-	-	0	-	-	0	10	20	-	-	-	-	10	0	-	-	0	-	-	-	60	-
Wheat (winter)	0	10	65	30	10	30	20	55	0	0	0	30	10	10	10	10	60	20	10	70	40	70
Wild buckwheat	-	-	0	-	-	0	20	10	-	-	-	-	20	0	-	-	0	-	-	0	0	-
Wild mustard	-	-	0	-	-	90	10	40	-	-	-	-	75	20	-	-	0	-	-	0	50	-
Wild oat	-	-	0	-	-	5	5	0	-	-	-	-	0	0	-	-	0	-	-	0	5	-
Windgrass	-	-	70	-	-	90	90	90	-	-	-	-	85	70	-	-	60	-	-	90	90	-
Table E									COMPOUND													
Rate 125 g/ha	148	151	158	170	191	192	199	211	218	219	225	241	242	243	245	271	276	277	285	287	293	295
Postemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-
Barley (winter)	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	60	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
I. Ryegrass	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	60	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-

Rape	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	10	70	15	75	30	30	55	20	65	20	75	20	10	70	0	10	10	0	20	40	50	30
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-
Wild oat	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	95	-	-	-	-	-	-	-	-	-

Table E

	COMPOUND															
Rate 125 g/ha	299	310	314	315	317	350	351	353	354	367	370	371	372	375	387	388
Postemergence																
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I. Ryegrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	60	80	65	70	70	50	60	20	30	50	70	70	65	35	20	30
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E

	COMPOUND																					
Rate 125 g/ha	4	38	93	98	105	107	108	109	110	111	112	113	114	116	117	119	131	132	137	138	146	147
Preemergence																						
Annual bluegras	-	-	50	-	-	80	60	40	-	-	-	-	50	60	-	-	70	-	-	-	60	-
Barley (winter)	10	0	50	20	0	20	20	10	0	0	10	10	5	30	20	10	65	10	20	60	10	10
Blackgrass	30	25	70	30	20	85	75	65	50	0	20	30	50	50	50	10	50	20	20	60	85	20
Blk nightshade	-	-	65	-	-	95	85	75	-	-	-	-	20	80	-	-	70	-	-	85	85	-
Chickweed	-	-	20	-	-	50	40	40	-	-	-	-	15	100	-	-	100	-	-	-	30	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-
Deadnettle	-	-	10	-	-	60	10	20	-	-	-	-	20	95	-	-	30	-	-	65	40	-
Downy brome	-	-	60	-	-	60	30	0	-	-	-	-	10	60	-	-	85	-	-	90	60	-
Field violet	-	-	10	-	-	30	0	50	-	-	-	-	0	50	-	-	20	-	-	50	10	-
Galium	-	-	15	-	-	70	50	100	-	-	-	-	100	100	-	-	60	-	-	50	40	-
Green foxtail	50	80	80	60	55	100	-	85	60	0	20	70	100	50	60	50	100	60	15	70	50	55
I. Ryegrass	20	0	70	50	30	98	45	100	0	0	0	50	30	30	45	35	100	20	20	70	50	20
Jointed goatgra	-	-	70	-	-	50	40	20	-	-	-	-	20	30	-	-	50	-	-	65	45	-
Kochia	-	-	0	-	-	60	50	0	-	-	-	-	25	0	-	-	0	-	-	20	0	-
Lambsquarters	-	-	100	-	-	100	100	60	-	-	-	-	50	100	-	-	100	-	-	100	100	-
LS canarygrass	-	-	80	-	-	80	50	50	-	-	-	-	50	70	-	-	70	-	-	70	40	-
Rape	-	-	0	-	-	70	60	10	-	-	-	-	0	60	-	-	70	-	-	30	60	-
Redroot pigweed	-	-	100	-	-	100	90	70	-	-	-	-	50	100	-	-	100	-	-	90	70	-
Russian thistle	-	-	0	-	-	0	0	0	-	-	-	-	0	0	-	-	10	-	-	10	0	-
Scentless chamo	-	-	-	-	-	80	60	0	-	-	-	-	30	-	-	-	-	-	-	-	15	-
Spring Barley	-	-	10	-	-	70	10	5	-	-	-	-	0	40	-	-	20	-	-	60	20	-
Spring Wheat	-	-	50	-	-	75	20	20	-	-	-	-	0	15	-	-	70	-	-	55	50	-

Sugar b et	-	-	10	-	-	100	40	0	-	-	-	-	20	50	-	-	80	-	-	0	60	-
Sunflower	-	-	5	-	-	30	0	0	-	-	-	-	0	15	-	-	20	-	-	55	20	-
Wheat (winter)	0	10	40	30	10	30	10	30	0	0	0	50	10	55	60	20	35	30	20	70	10	20
Wild buckwheat	-	-	30	-	-	90	100	20	-	-	-	-	20	40	-	-	30	-	-	50	70	-
Wild mustard	-	-	65	-	-	85	90	30	-	-	-	-	50	75	-	-	60	-	-	40	60	-
Wild oat	10	0	60	50	30	60	30	30	0	0	0	30	40	30	20	10	50	35	20	60	30	0
Windgrass	-	-	100	-	-	100	100	100	-	-	-	-	100	100	-	-	100	-	-	100	100	-

Table E

	COMPOUND																					
Rate 125 g/ha	148	151	158	170	191	192	199	211	218	219	225	241	242	243	245	271	276	277	285	287	293	295
Preemergence																						
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-
Barley (winter)	10	20	20	60	10	20	70	10	40	20	50	40	40	30	70	35	50	30	0	30	40	20
Blackgrass	50	75	20	60	10	40	65	0	65	0	60	60	95	65	50	30	30	60	20	50	40	0
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Green foxtail	30	80	10	100	30	50	100	0	30	65	50	65	70	75	100	70	60	95	20	60	55	50
I. Ryegrass	20	50	20	70	0	20	60	-	55	30	50	60	95	70	60	60	30	65	20	55	30	40
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	60	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	-
Sugar be t	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	-
Wheat (winter)	0	10	10	70	10	10	70	50	50	35	65	40	65	50	50	30	20	30	30	45	40	40
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	60	-	-	-	-	-	-	-	-	-

Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	-
Wild oat	15	20	50	70	30	30	70	20	70	30	50	50	60	60	30	50	50	50	10	70	0	0
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-

Table E	COMPOUND															
Rate 125 g/ha	299	310	314	315	317	350	351	353	354	367	370	371	372	375	387	388
Preemergence																
Annual bluegras	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	40	60	50	55	40	5	70	10	20	20	60	40	60	35	20	10
Blackgrass	60	85	40	50	50	50	35	10	50	60	50	85	70	20	0	0
Blk nightshade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	100	100	60	90	100	65	40	70	85	70	70	35	60	50	10	30
I. Ryegrass	70	70	50	55	60	60	55	40	50	60	55	60	60	50	0	30
Jointed goatgra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wh at (winter)	50	40	65	55	50	40	50	20	30	60	50	60	60	30	50	50
Wild buckwheat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	65	50	70	65	60	40	70	30	0	55	60	70	50	55	0	20
Windgrass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E COMPOUND

Rate 62 g/ha	91	93	107	108	109	110	111	112	113	114	116	117	119	131	138	146	148	151	158	170	199	225
Postemergence																						
Annual bluegras	-	20	20	0	-	-	-	-	-	-	100	-	-	55	-	85	-	-	-	-	-	-
Barley (winter)	-	0	5	10	-	-	-	-	-	-	0	-	-	5	-	5	-	-	-	-	-	-
Blackgrass	-	10	5	5	-	-	-	-	-	-	0	-	-	85	-	70	-	-	-	-	-	-
Blk nightshade	-	0	10	20	-	-	-	-	-	-	10	-	-	50	-	50	-	-	-	-	-	-
Chickweed	-	0	10	10	-	-	-	-	-	-	0	-	-	60	-	30	-	-	-	-	-	-
Common poppy	-	0	0	10	-	-	-	-	-	-	30	-	-	65	-	60	-	-	-	-	-	-
Deadnettle	-	0	0	10	-	-	-	-	-	-	0	-	-	30	-	50	-	-	-	-	-	-
Downy brome	-	0	0	0	-	-	-	-	-	-	0	-	-	55	-	55	-	-	-	-	-	-
Field violet	-	0	0	0	-	-	-	-	-	-	60	-	-	60	-	50	-	-	-	-	-	-
Galium	-	0	5	0	-	-	-	-	-	-	30	-	-	50	-	50	-	-	-	-	-	-
Green foxtail	-	0	20	10	-	-	-	-	-	-	20	-	-	55	-	70	-	-	-	-	-	-
I. Ryegrass	-	0	0	20	-	-	-	-	-	-	0	-	-	50	-	50	-	-	-	-	-	-
Jointed goatgra	-	0	0	10	-	-	-	-	-	-	30	-	-	30	-	55	-	-	-	-	-	-
Kochia	-	0	5	20	-	-	-	-	-	-	0	-	-	45	-	30	-	-	-	-	-	-
Lambsquarters	-	0	15	10	-	-	-	-	-	-	20	-	-	0	-	50	-	-	-	-	-	-
LS canarygrass	-	0	15	0	-	-	-	-	-	-	10	-	-	50	-	30	-	-	-	-	-	-
Rape	-	0	20	60	-	-	-	-	-	-	10	-	-	10	-	60	-	-	-	-	-	-
Redroot pigweed	-	0	20	5	-	-	-	-	-	-	0	-	-	5	-	30	-	-	-	-	-	-
Russian thistle	-	0	0	0	-	-	-	-	-	-	40	-	-	10	-	20	-	-	-	-	-	-
Scentless chamo	-	0	10	10	-	-	-	-	-	-	50	-	-	55	-	20	-	-	-	-	-	-
Spring Barley	-	0	20	10	-	-	-	-	-	-	5	-	-	5	-	20	-	-	-	-	-	-
Spring Wheat	-	0	0	10	-	-	-	-	-	-	5	-	-	5	-	10	-	-	-	-	-	-
Sugar be t	-	0	10	5	-	-	-	-	-	-	0	-	-	0	-	0	-	-	-	-	-	-
Sunflower	-	0	10	20	-	-	-	-	-	-	20	-	-	10	-	0	-	-	-	-	-	-
Veronica hedera	-	0	10	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	10	20	40	0	0	0	0	0	15	0	20	0	10	50	60	20	0	10	10	80	50	60
Wild buckwheat	-	0	0	0	-	-	-	-	-	-	0	-	-	50	-	20	-	-	-	-	-	-
Wild mustard	-	0	5	5	-	-	-	-	-	-	70	-	-	30	-	60	-	-	-	-	-	-
Wild oat	-	0	5	0	-	-	-	-	-	-	20	-	-	40	-	20	-	-	-	-	-	-
Windgrass	-	60	85	80	-	-	-	-	-	-	70	-	-	85	-	85	-	-	-	-	-	-

Table E

	COMPOUND			
Rate 62 g/ha	242	245	287	310
Postemergence				
Annual bluegras	95	-	-	-

Barley (winter)	20	-	-	-
Blackgrass	60	-	-	-
Blk nightshade	60	-	-	-
Chickweed	0	-	-	-
Common poppy	55	-	-	-
Deadnettle	100	-	-	-
Downy brome	30	-	-	-
Fi ld violet	30	-	-	-
Galium	0	-	-	-
Green foxtail	60	-	-	-
I. Ry grass	50	-	-	-
Jointed goatgra	55	-	-	-
Kochia	20	-	-	-
Lambsquarters	10	-	-	-
LS canarygrass	65	-	-	-
Rape	20	-	-	-
Redroot pigweed	0	-	-	-
Russian thistle	50	-	-	-
Scentless chamo	55	-	-	-
Spring Barley	5	-	-	-
Spring Wheat	15	-	-	-
Sugar beet	50	-	-	-
Sunflower	10	-	-	-
Veronica hedera	-	-	-	-
Wheat (winter)	65	10	30	75
Wild buckwheat	50	-	-	-
Wild mustard	0	-	-	-
Wild oat	30	-	-	-
Windgrass	90	-	-	-

Tabl E	COMPOUND																					
Rate 62 g/ha	91	93	107	108	109	110	111	112	113	114	116	117	119	131	138	146	148	151	158	170	199	225
Preemergence																						
Annual bluegras	-	10	70	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barley (winter)	40	50	20	10	10	0	0	0	10	0	10	25	5	40	30	10	10	10	10	60	70	50
Blackgrass	60	50	60	40	30	20	0	10	60	30	40	50	20	60	50	70	20	45	10	60	60	50
Blk nightshade	-	60	70	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Chickweed	-	60	80	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deadnettle	-	10	50	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Downy brome	-	40	50	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field violet	-	0	70	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium	-	10	50	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green foxtail	80	70	80	65	50	30	0	10	55	45	65	50	10	60	60	55	20	30	0	100	100	60
I. Ryegrass	40	50	55	20	20	0	0	0	50	20	50	50	10	70	60	40	20	30	10	60	70	30
Jointed goatgra	-	15	40	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kochia	-	0	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lambsquarters	-	100	100	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS canarygrass	-	40	50	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rape	-	0	60	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	100	100	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian thistle	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	70	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Barley	-	5	30	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spring Wheat	-	30	60	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sugar beet	-	0	70	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunflower	-	10	20	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat (winter)	40	40	50	0	20	0	0	0	40	0	30	30	0	50	60	0	0	0	0	70	60	30
Wild buckwheat	-	30	60	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild mustard	-	30	100	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild oat	60	50	50	15	20	0	0	0	20	20	20	20	20	50	50	25	10	10	50	65	60	40
Windgrass	-	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table E		COMPOUND		
Rate 62 g/ha	242	245	287	310
Preemergence				
Annual bluegras	-	-	-	-
Barley (winter)	30	50	20	50
Blackgrass	70	60	30	85
Blk nightshade	-	-	-	-
Chickw ed	-	-	-	-
Common poppy	-	-	-	-
Deadnettle	-	-	-	-
Downy brome	-	-	-	-

Field violet	-	-	-	-
Galium	-	-	-	-
Green foxtail	-	100	60	100
I. Ryegrass	70	40	50	70
Jointed goatgra	-	-	-	-
Kochia	-	-	-	-
Lambsquarters	-	-	-	-
LS canarygrass	-	-	-	-
Rape	-	-	-	-
Redroot pigweed	-	-	-	-
Russian thistle	-	-	-	-
Scentless chamo	-	-	-	-
Spring Barley	-	-	-	-
Spring Wheat	-	-	-	-
Sugar beet	-	-	-	-
Sunflower	-	-	-	-
Wheat (winter)	40	20	30	60
Wild buckwheat	-	-	-	-
Wild mustard	-	-	-	-
Wild oat	60	40	30	70
Windgrass	-	-	-	-

Table E

	COMPOUND								
Rat 31 g/ha	91	93	107	146	151	225	242	245	287
Postemergence									
Annual bluegras	-	-	-	-	-	-	-	-	-
Barley (winter)	-	-	-	-	-	-	-	-	-
Blackgrass	-	-	-	-	-	-	-	-	-
Blk nightshade	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-
Green foxtail	-	-	-	-	-	-	-	-	-

Table E

	COMPOUND								
Rate 31 g/ha	91	93	107	146	151	225	242	245	287
Preemergence									
Annual bluegras	-	-	-	-	-	-	-	-	-
Barley (winter)	20	20	10	20	10	0	30	40	30
Blackgrass	20	0	30	20	30	30	55	60	30
Blk nightshade	-	-	-	-	-	-	-	-	-
Chickweed	-	-	-	-	-	-	-	-	-
Common poppy	-	-	-	-	-	-	-	-	-
Deadnettle	-	-	-	-	-	-	-	-	-
Downy brome	-	-	-	-	-	-	-	-	-
Field violet	-	-	-	-	-	-	-	-	-
Galium	-	-	-	-	-	-	-	-	-
Green foxtail	60	30	55	50	20	30	50	60	30

I. Ryegrass	-	-	-	-	-	-	-	-	-
Jointed goatgra	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-
R droot pigweed	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-
Veronica hedera	-	-	-	-	-	-	-	-	-
Wheat (winter)	0	0	50	30	10	50	55	0	30
Wild buckwheat	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-
Wild oat	-	-	-	-	-	-	-	-	-
Windgrass	-	-	-	-	-	-	-	-	-

I. Ryegrass	40	30	40	50	20	20	65	20	20
Jointed goatgra	-	-	-	-	-	-	-	-	-
Kochia	-	-	-	-	-	-	-	-	-
Lambsquarters	-	-	-	-	-	-	-	-	-
LS canarygrass	-	-	-	-	-	-	-	-	-
Rape	-	-	-	-	-	-	-	-	-
Redroot pigweed	-	-	-	-	-	-	-	-	-
Russian thistle	-	-	-	-	-	-	-	-	-
Scentless chamo	-	-	-	-	-	-	-	-	-
Spring Barley	-	-	-	-	-	-	-	-	-
Spring Wheat	-	-	-	-	-	-	-	-	-
Sugar beet	-	-	-	-	-	-	-	-	-
Sunflower	-	-	-	-	-	-	-	-	-
Wheat (winter)	10	20	0	20	0	10	30	20	40
Wild buckwheat	-	-	-	-	-	-	-	-	-
Wild mustard	-	-	-	-	-	-	-	-	-
Wild oat	40	40	20	40	10	30	50	30	0
Windgrass	-	-	-	-	-	-	-	-	-

Test F Protocol

Abutilon theophrasti (ABUTH), *Chenopodium album* (CHEAL), *Amaranthus rudis* (AMATA), *Setaria faberii* (SETFA), *Panicum dichotomiflorum* (PANDI), and *Digitaria sanguinalis* (DIGSA) were grown from seed in pots of an artificial potting mixture in a greenhouse. Compounds of the present invention were applied at 70 and 105 g ai/ha preemergence. Rimsulfuron was applied at 8.8 and 17.5 g ai/ha. Mixtures of the compounds of the present invention and rimsulfuron were also applied.

Following application, the plants were maintained by watering as needed. A fertilizer solution of Peter's 20-20-20 (10 pounds/5 gallons of water) plus Sprint 330, a Iron Chelate micronutrient, (113.5 grams/5 gallons of water) was injected into the water with an Anderson fertilizer injection system to provide approximately 218 ppm of nitrogen with each watering. Artificial lighting was used to supplement natural light to produce a 14 hour photoperiod and an additional one hour light period was used between 1:00 am to 2:00 am for a night interruption. Greenhouse temperatures were targeted for 27 °C in the day and 21 °C at night. At 21 days after treatment, all plants were evaluated for injury as compared to control plants that were sprayed only with non-phytotoxic solvent. Mean plant response ratings, summarized in Table F, are based upon a 0 to 100 scale where 0 is no effect and 100 is complete control.

Colby's equation was used to calculate the expected additive herbicidal effect of the mixtures of Compound 21 and the mixture partners listed above. Colby's equation (Colby, S. R. "Calculating Synergistic and Antagonistic Responses of Herbicide Combinations," *Weeds*, 15(1), pp 20–22 (1967)) calculates the expected additive effect of herbicidal mixtures, and for two active ingredients is of the form:

$$P_{a+b} = P_a + P_b - (P_a P_b / 100)$$

wherein P_{a+b} is the percentage effect of the mixture expected from additive contribution of the individual components,

P_a is the observed percentage effect of the first active ingredient at the same use rate as in the mixture, and

P_b is the observed percentage effect of the second active ingredient at the same use rate as in the mixture.

Combinations of Compound 113, Compound 131, and Compound 242 with rimsulfuron are surprisingly found to provide better control of certain weeds than expected by calculation from the Colby's equation, thus demonstrating synergism. Weeds other than those specifically listed are also controlled by mixtures of compounds of the present invention and rimsulfuron. Different ratios of compounds of the present invention with rimsulfuron, and different formulation types, also provide useful weed control from the combination of the two herbicides.

TABLE F

Cmpd. 113	Rimsulfuron	ABUTH Observed	ABUTH Expected†	CHEAL Observed	CHEAL Expected†
Alone					
70	0	45	–	15	–
105	0	65	–	35	–
0	8.8	20	–	25	–
0	17.5	40	–	60	–
Mixtures					
70	8.8	75	56	60	36
70	17.5	85	67	95	66
105	8.8	90	72	100	51
105	17.5	80	79	100	74

Cmpd. 113	Rimsulfuron	AMATA Observed	AMATA Expected†	SETFA Observed	SETFA Expected†
Alone					
70	0	35	–	60	–
105	0	25	–	65	–
0	8.8	10	–	75	–
0	17.5	15	–	90	–
Mixtures					
70	8.8	15	23	95	90
70	17.5	70	45	100	96
105	8.8	25	33	100	91
105	17.5	90	36	100	97

Cmpd. 113	Rimsulfuron	PANDI Observed	PANDI Expected†	DIGSA Observed	DIGSA Expected†
Alone					
70	0	100	–	95	–
105	0	95	–	70	–
0	8.8	75	–	95	–
0	17.5	95	–	100	–

Mixtures					
70	8.8	90	100	100	100
70	17.5	100	100	100	100
105	8.8	100	99	90	99
105	17.5	85	99	100	100

		ABUTH		CHEAL	
Cmpd. 131	Rimsulfuron	Observed	Expected†	Observed	Expected†
Alone					
70	0	40	–	60	–
105	0	60	–	95	–
0	8.8	20	–	25	–
0	17.5	40	–	60	–
Mixtures					
70	8.8	50	52	95	70
70	17.5	85	64	100	84
105	8.8	80	68	95	96
105	17.5	75	76	100	98

		AMATA		SETFA	
Cmpd. 131	Rimsulfuron	Observed	Expected†	Observed	Expected†
Alone					
70	0	50	–	35	–
105	0	40	–	65	–
0	8.8	10	–	75	–
0	17.5	15	–	90	–
Mixtures					
70	8.8	95	54	85	84
70	17.5	100	58	100	93
105	8.8	95	46	95	91
105	17.5	85	49	100	97

		PANDI		DIGSA	
Cmpd. 131	Rimsulfuron	Observed	Expected†	Observed	Expected†
Alone					
70	0	100	–	100	–
105	0	95	–	100	–
0	8.8	75	–	95	–
0	17.5	95	–	100	–
Mixtures					
70	8.8	75	100	100	100
70	17.5	95	100	100	100
105	8.8	100	99	100	100
105	17.5	100	100	100	100

		ABUTH		CHEAL	
Cmpd. 242	Rimsulfuron	Observed	Expected†	Observed	Expected†
Alone					
70	0	50	–	30	–
105	0	70	–	100	–
0	8.8	20	–	25	–
0	17.5	40	–	60	–
Mixtures					
70	8.8	85	60	100	48
70	17.5	80	81	85	72
105	8.8	85	76	100	100
105	17.5	80	82	100	100

		AMATA		SETFA	
Cmpd. 242	Rimsulfuron	Observed	Expected†	Observed	Expected†
Alone					
70	0	20	–	60	–
105	0	55	–	75	–
0	8.8	10	–	75	–
0	17.5	15	–	90	–

Mixtures					
70	8.8	70	28	90	90
70	17.5	85	32	100	96
105	8.8	35	60	75	94
105	17.5	65	62	100	97

		PANDI		DIGSA	
Cmpd. 242	Rimsulfuron	Observed	Expected†	Observed	Expected†
Alone					
70	0	60	–	100	–
105	0	80	–	100	–
0	8.8	75	–	95	–
0	17.5	95	–	100	–
Mixtures					
70	8.8	95	90	100	100
70	17.5	100	98	100	100
105	8.8	100	85	100	100
105	17.5	100	99	100	100

* Data are reported as percent control.
† Expected from the Colby Equation

<u>Test G protocol</u>

In soil-containing pots were planted seeds of maize hybrid P33G26 that was previously treated with dichlormid, fenchlorazole-ethyl, and naphthalic anhydride (or no safener). The soil surface was then treated with several rates of Compound 131 or Compound 146 dissolved in a non-phytotoxic solvent using a flat-fan sprayer calibrated to deliver 310 L/ha. Treatments were replicated 4 or 5 times. The treated and untreated plants were allowed to grow in a greenhouse using supplementary artificial lighting with a day-length of 14 hours, with the temperature maintained at about 27 °C during the day and 24 °C during the night. Plants were kept watered with a dilute balanced fertilizer solution.

At 28 days after application, the treated plants were compared with untreated controls and visually evaluated. Mean plant response ratings, summarized in Table G, are based upon a 0 to 100 scale where 0 is no effect and 100 is complete control.

TABLE G*

		Safener			
Compd	Rate (g ai/ha)	None	Dichlormid	Fenchlorazole-ethyl	naphthalic anhydride
131	560	95	40	96	ND†
131	280	91	3	92	ND†
131	140	88	3	91	0
131	70	80	3	85	ND†
146	1120	85	4	85	35
146	560	80	4	78	ND†
146	280	73	1	74	ND†
146	140	49	1	3	0

* Data are reported as percent control.

† naphthalic anhydride treatment severely inhibited corn germination. Where corn did satisfactorily emerge, it was safened against the herbicide damage.

As can be seen from Table F, in the absence of any safener, both Compound 131 and Compound 146 at rates ranging from 70 to 560 g/ha, and 140 to 1120 g/ha respectively, were severely injurious to maize. With the exception of Compound 131 at the rate of 560 g/ha (entry 1 in Table F), the presence of dichlormid reduced the injury to an insignificant level from which the corn would be expected to recover with no long-term deleterious effects. The presence of fenchlorazole-ethyl, however, did not provide safening effects except for low rate of Compound 146 (Entry 8 in Table F). The dramatic safening effects observed here were unexpected and surprising. Based on this discovery, it is anticipated that other compounds known to safen herbicides on corn, soybeans or other crops are useful in safening compounds of the present invention on corn, soybeans or other crops.

Test H protocol

Mixtures of the herbicide and safeners were applied to pots of a soil mixture previously sown with corn. Pioneer hybrid P33G26 corn was sown in pots containing a sterile mix of 60% sassafras soil and 40% *Metro Mix 360* ® growing medium (pH 6.7, O.M. 2%). Test compounds were dissolved in AGWT (a mixture of 0.25% Tween 20 surfactant, 5% water, 5% glycerin and 89.75% acetone) and sprayed on the soil as pots passed under a stationary 8002E nozzle. Treatments were applied at a 33 gal/acre rate of the AGWT carrier. After treatment, the test pots were placed in the greenhouse and watered. There were two replications for each treatment. Each pot contained eight corn seeds. The pots within each

replication were placed in random positions on greenhouse benches. Test plants were fertilized as they were watered with approximately 200 ppm of N (as water soluble 20-20-20 fertilizer) which was metered into the water lines with a fertilizer injector. Daytime temperature was 23-30 C° and night time temperature was 18-25 C°. The test plants were supplemented with artificial lighting. The lights were activated whenever the natural light intensity dropped below the programmed threshold. Day length was maintained for approximately 14 hours.

The test was evaluated approximately 12 days after treatment. Treated plants were visually compared to untreated controls and rated on a scale from 0 to 100 where 0 is no effect and 100 is plant death. The results summarized in Table H are the averages from the two replications for each treatment.

TABLE H

Compd	Rate (g ai/ha)	None	Dichlormid 70 g/ha	Dichlormid 140 g/ha	Dichlormid 280 g/ha
113	70	18	0	0	0
113	140	25	20	0	0
113	280	53	35	28	33

Compd	Rate (g ai/ha)	None	Benoxacor 70 g/ha	Benoxacor 140 g/ha	Benoxacor 280 g/ha
113	70	18	0	0	0
113	140	25	0	0	8
113	280	53	38	18	20

As shown in Table H, both dichlormid and benoxacor functioned very effectively as safeners for Compound 113. Without safener, Compound 113 at rates from 70 to 280 g/ha produced corn injury of 18 to 53%. In the presence of dichlormid or benoxacor at rates from 70 to 280 g/ha, corn injury was reduced to from 0 to 38%. The dramatic and unexpected safening by dichlormid and benoxacor demonstrates the potential utility of mixtures of these compounds with Compound 113, or other similar compounds of this invention, for the control of undesired vegetation in corn production.